

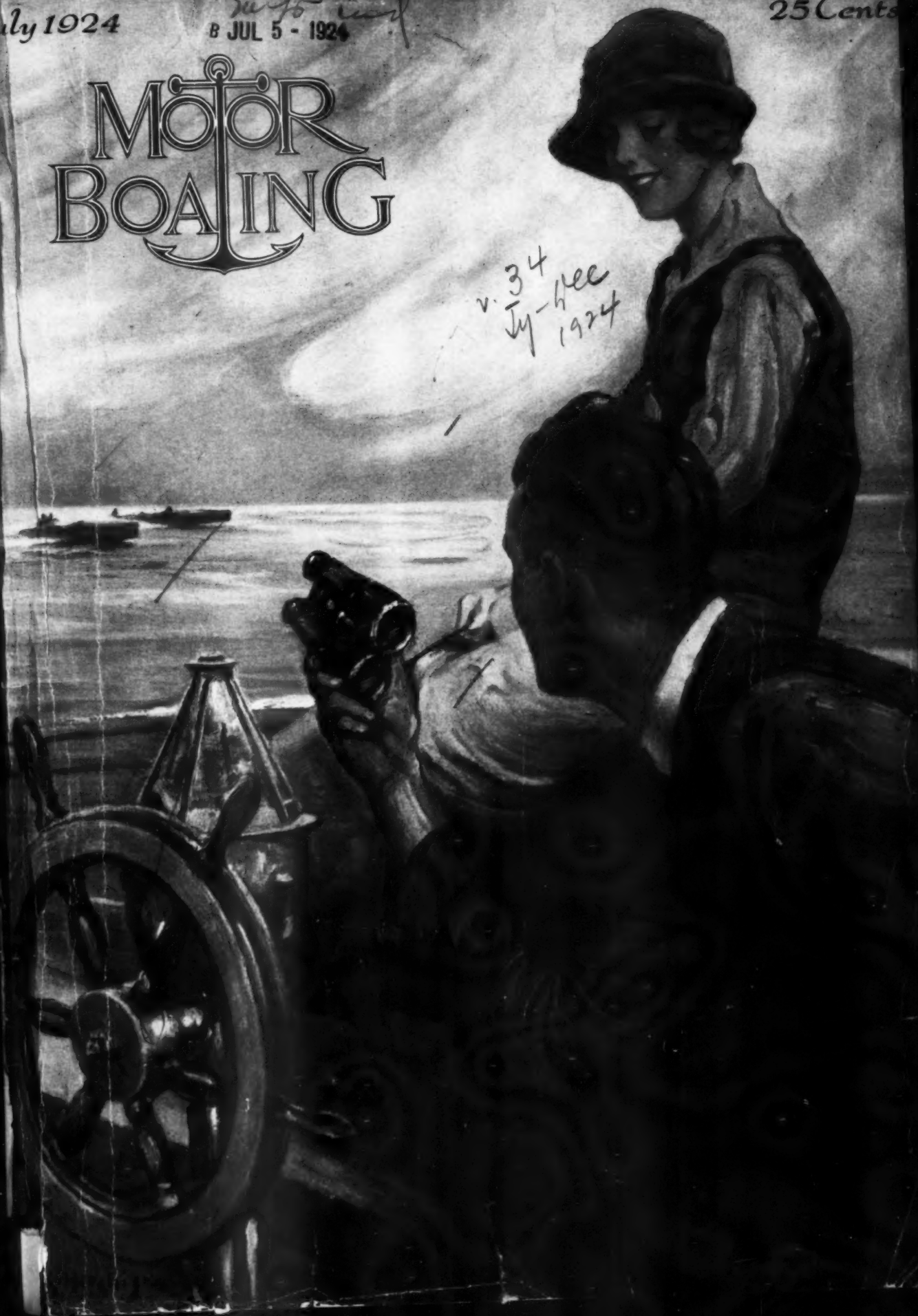
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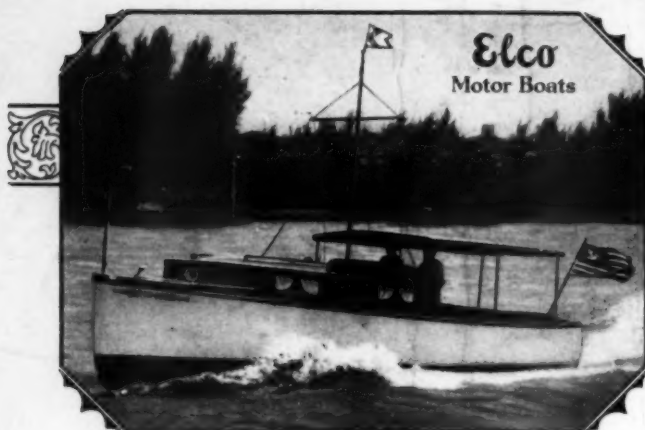
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MOTOR BOATING

*v. 34
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Standardized Models

30-Foot Veedette
34-Foot Cruisette
45-Foot Cruiser
56-Foot Twin Screw
Deck House Cruiser

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DOES this picture of the ELCO Cruisette appeal to you? Imagine yourself the proud possessor of this home afloat, in which you may enjoy pleasant hours, days and weeks of real relaxation, rest and enjoyment; cruising along the coast, exploring the quiet coves, bays, rivers and islands.

This boat will accommodate a party of six comfortably, giving everybody a berth. You may operate this beautiful ELCO Cruisette for a season, pay the necessary upkeep and cruise 1000 miles for less than \$500.00.

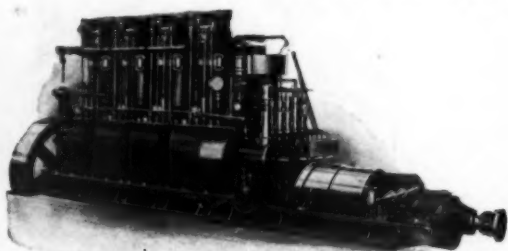
Larger ELCO Boats operate on a corresponding scale.

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Correspondence should be addressed to:

PORT ELCO — Division of Sales and Exhibit
247 Park Avenue and 107 East 46th Street
Telephone Vanderbilt 2320 NEW YORK CITY
THE ELCO WORKS, BAYONNE, NEW JERSEY

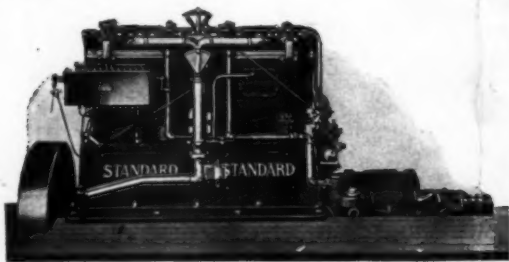
STANDARD ENGINES



90 H.P. 4 Cylinder, Oil Engine.

The STANDARD Oil Engine (Full Diesel) is equal in simplicity of operation and freedom from care to our gasoline engine. Airless Fuel Injection, built in sizes from 90 to 300 H. P. reverse gear and reversing types. Its first cost and operating cost make it a marine economic.

The STANDARD once installed gives years of comfort, service, satisfaction and pride of ownership. Follow the successful path of others and insure yourself the maximum of pleasure; install a STANDARD.



32-27 H.P. 4 Cylinder Gasoline Engine.

Write Us Your Requirements

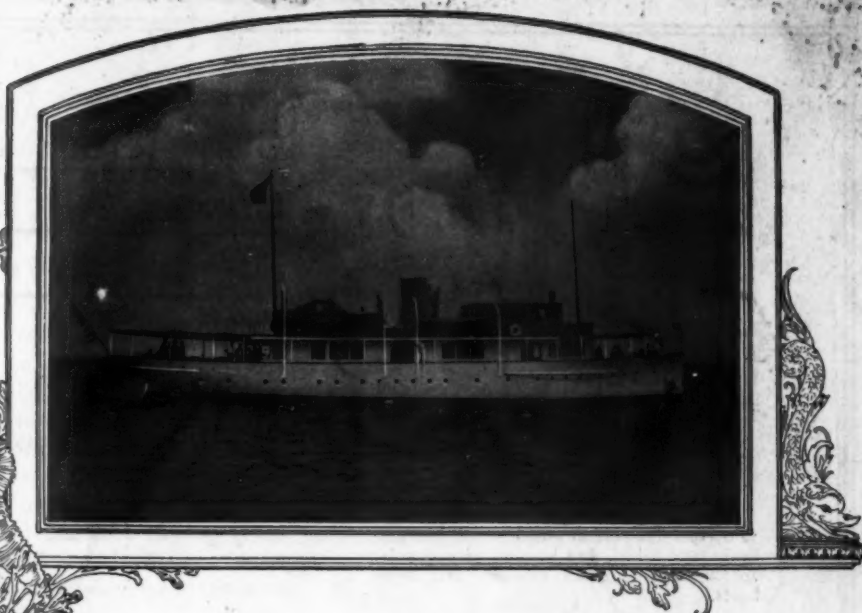
Back of the STANDARD Fuel Oil and Gasoline Engines is the

STANDARD MOTOR CONSTRUCTION COMPANY

178 Whiton Street

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M. Y. CYNTHIA



DINING SALON



OWNER'S BEDROOM

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Offers Unusual Facilities

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Every phase of marine work, from important reconstruction to minor repair is carried on directly by this organization. Thus supervision is constant and under the rigid inspection of Tebo Engineers.

Many of the best known American Yachts come back to the Basin from year to year for winter storage and spring conditioning or repair.

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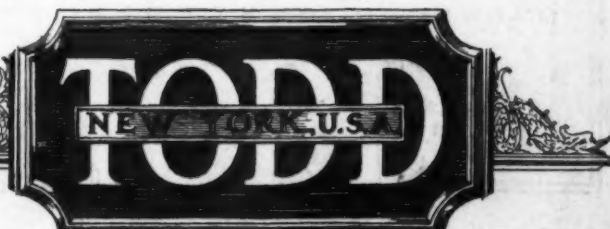
Diesel Engine Installations

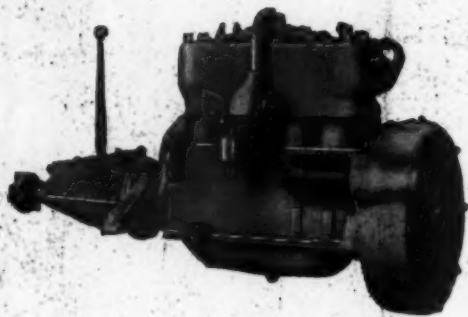
Electric Drive Installations

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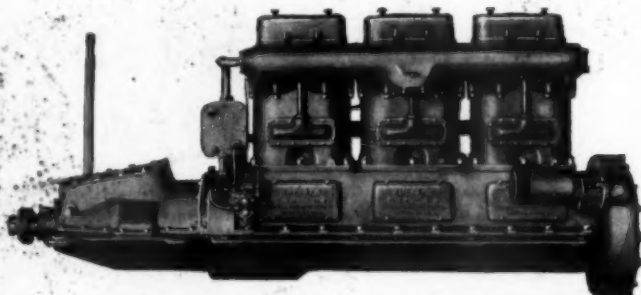
Plant of Tebo Yacht Basin

Foot of 23d Street, Brooklyn, N. Y.





14-30 H.P. 4 cylinder, $3\frac{1}{2} \times 5$, Unit Power Plant, the engine that brings Buffalo quality within modest pocket-book limits and which has become very popular for runabouts, small cruisers and work boats.



The latest Buffalo, a 6 cylinder, $5\frac{1}{2} \times 7$, Conservative High-Speed engine for the larger runabouts and express cruisers or for any boat where light weight combined with absolute reliability is the chief consideration. Combines slow speed heavy duty reliability with added advantages of higher propeller speed and greater compactness.

Four sizes of 4 cylinder Buffalo Cruiser and runabout type are also offered. 16 to 80 H.P.

Tell us your power problem so that we can send you information regarding the Buffalo most suitable for your boat.

BUFFALO GASOLENE MOTOR COMPANY

1274-1286 Niagara St., Buffalo, N. Y., U. S. A.

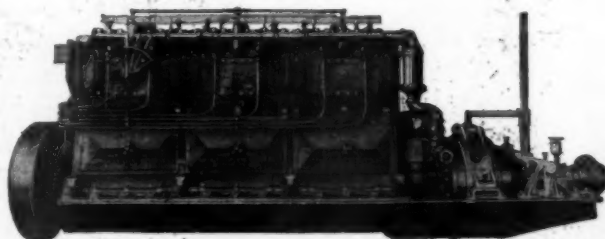
Completeness and Quality Covers All Requirements Satisfies Every Demand

In the Buffalo-line there is an engine suitable for every size or type of boat—runabout or cruiser—tug or fishing boat—small sailing auxiliary or fast express cruising yacht. One quality—the highest—is maintained throughout the entire line and prices are really low considering the quality.

The Buffalo reputation is no idle boast but is an easily proven fact and has been built up by thirty years' conscientious effort and experience—Buffalo builders being pioneers in four cycle marine engine manufacture — and Buffalo engines are rendering steady, satisfactory service in every part of the world.

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The largest slow speed, heavy duty Buffalo engine. 6 cylinder, 10×12 . This type also built in 2 and 4 cylinder sizes, 10 to 150 H.P.

"The Engine of Constant Service"

Land Lubber Landings

LANDING your craft with a graceful sweep is the yachtsman's test that lifts you out of the land-lubber class. Come from a forward speed to a pretty halt parallel with the dock and you are "Commodore" to the critical "salts" on the yacht club pier. Draw your bow up like a spirited horse in a rush of waves to a stop 2 inches off the dock without a rub and you are worthy of the title "Captain."

A good landing takes skill, but more important—the powerful grip of a Paragon gear. Slip in the lever as you glide at a dock and you release the reversing force that is trusted with the power of 40 great marine engines. It's a strength that is safe, sure and dependable for more years of abusive service than your engine. Equipping your boat with a Paragon means to have on board "the world's standard transmission" that assures safer, prettier landings and long years of dependable service.

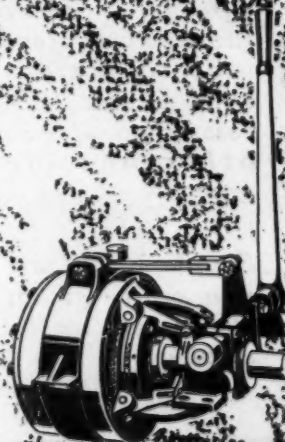
Paragons are built in three different types—the Yoke Type, popular with engine builders and for installation on extended base motors—the Enclosed Type, a self lubricating enclosed gear running in an oil bath—and the Unit Type, the most compact and the most easily installed gear on the market. Send for circular giving order directions and prices.

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PARAGON REVERSE GEARS



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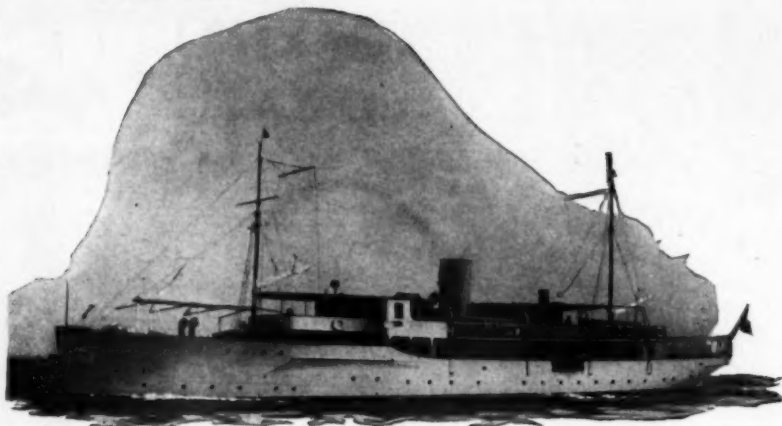
The Goodrich "Cutless Bearing" is water-lubricated.

Its tough Olivite-rubber surface when wet has a lower coefficient of friction than an oiled babbitted surface.

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Operates under sandiest, dirtiest water conditions with perfect success, impossible in other bearing types.

Supplied for any size craft — from the largest to the smallest.



Leading Naval Architects choose "Cutless Bearings" for the "Ohio"

—Diesel-equipped super-yacht

The "Ohio" has attracted unusual attention in marine circles.

She was particularly designed for off-shore service with powerful Winton-Diesel engines, elaborate accommodations and extensive radio equipment. When launched last year at the Newport News Shipbuilding & Dry Dock Co. the "Ohio" was at once pronounced "the super-yacht".

After a cruise of 50,000 miles she was recently placed in dry-dock. Here, at the suggestion of her designers, Cox & Stevens, who wished to bring her equipment up-to-date as the finest yacht of her type afloat, Goodrich "Cutless Bearings" were installed.

The performance of Goodrich "Cutless Bearings" on all kinds of craft, from the largest to the smallest—motorboats, tugs, schooners and barges—proves their superiority over prior types.

THE B. F. GOODRICH RUBBER COMPANY, Inc.
Akron, Ohio

ESTABLISHED 1870

Our Research Department invites suggestions for new uses of rubber

Goodrich

Cutless Bearings

"BEST IN THE LONG RUN"

Advertising Index will be found on page 220

A THING OF BEAUTY



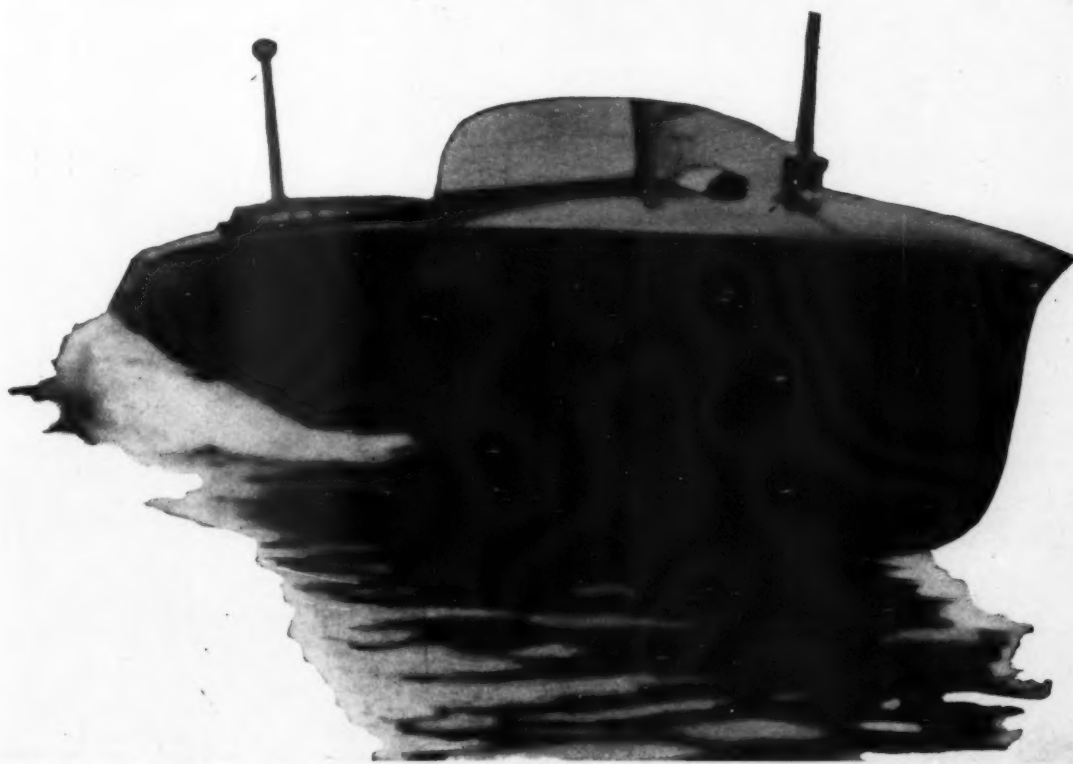
EXHIBITION of the Dodge Watercar in 15 principal cities of the United States brought conclusive proof of two important facts—

1. The Watercar is a thing of beauty which attracts people of every class and station.
2. The price of the Watercar — \$2250 F. O. B. Detroit—never fails to elicit expressions of wonderment.

To those who are familiar with the principles of good boat building, it is also apparent that this 22-foot speedster is built in a most exceptional way.

The Watercar is sold exclusively by Dodge Brothers dealers. Hundreds of these dealers who examined the boat at New York, Chicago and San Francisco, expressed the belief that they could sell the entire year's production in a month or two. Therefore, if you are interested in delivery in time for use this summer, write us today—or see your local Dodge Brothers dealer.

HORACE E. DODGE BOAT WORKS, INC.
2670 Atwater Street
DETROIT



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*Resists Corrosion
In Underwater Parts*

Memory, Winner of
the Bermuda Race,
Owned by Mr. Robert
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by Herreshoff Mfg.
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Underwater Parts of
TOBIN BRONZE.

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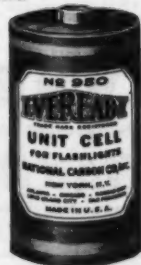
EVEREADY FLASHLIGHTS & BATTERIES

—they last longer

Keep to the channel—*use your flashlight!*



No. 2644—Eveready Focusing Searchlight with the 500-ft range. Eveready Unit Cells fit and improve all makes of flashlights. Eveready Unit Cells mean brighter light and longer battery life.



TO PICK up buoys after dark, use your flashlight. To find landings at night or to inspect your engine, use your flashlight. Eveready Flashlights are as necessary in boat equipment as your running lights and life-preservers.

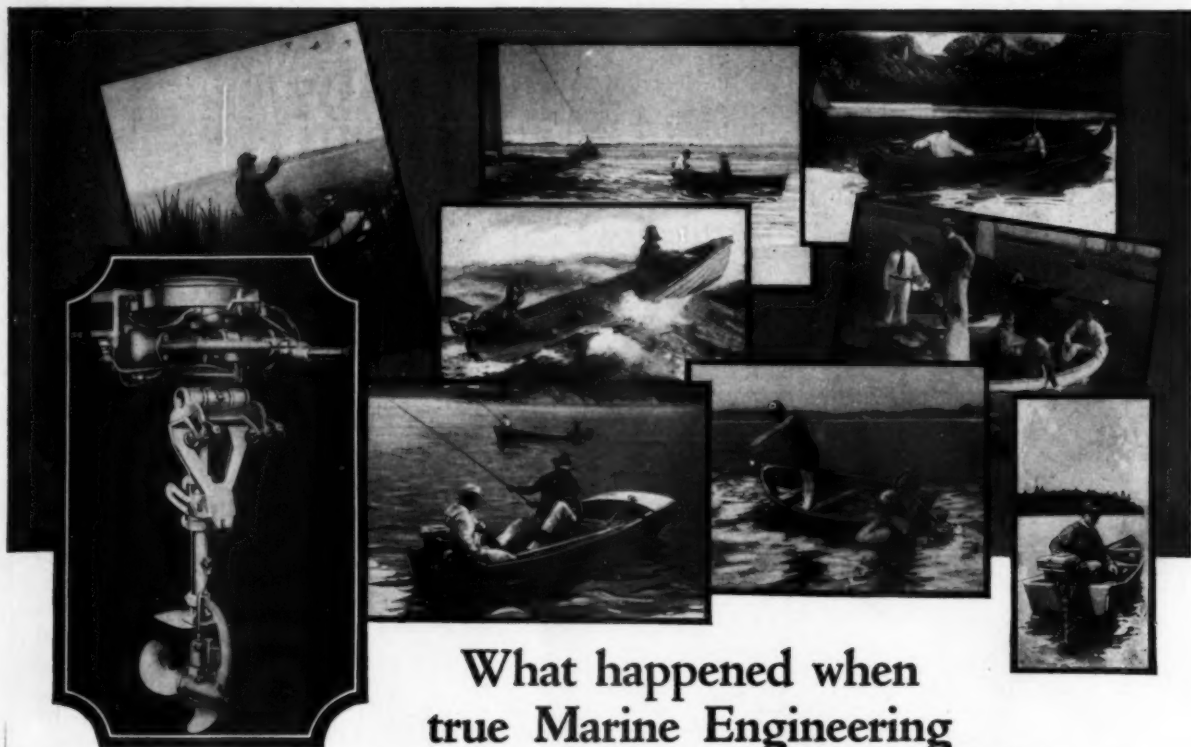
Eveready Focusing Flashlights are ideal for boating and all outdoor use. They drill darkness with their clear-white beam for distances of 200, 300 and 500 feet, depending on which Eveready you select.

If you have any flashlights not in use, put them back on the job with fresh, strong Eveready Unit Cells. And if you haven't a flashlight, see the nearest Eveready dealer at once.

Eveready dealers are now showing a wonderful assortment. New designs. New features. All the standard Eveready features are retained, of course, and there is no advance in prices. 65c to \$4.50, complete with battery—anywhere in the U. S. A.

Buy the improved Eveready Flashlights from sporting goods, electrical, hardware and marine supply dealers, drug and general stores, garages and auto accessory shops.

Manufactured and guaranteed by
National Carbon Company, Inc.
New York San Francisco
Canadian National Carbon Co., Limited
Toronto, Ontario



What happened when true Marine Engineering Principles were applied to the Outboard Motor

WHEN the outboard motor idea was new, people were so taken with the thought of putting a motor on a rowboat and giving their arms a rest that they didn't look much into the motors themselves.

About the time the novelty wore off, they were willing to admit that the idea was good, but there seemed to be something the matter with the way it was applied in those old motors.

About four years ago L. J. Johnson saw that the only way the outboard motor could be designed right was to approach it from a *marine engineering* standpoint.

A marine engine *must* take the boat where it is supposed to go, and must *bring it back*. You can't pick up a tow twenty miles from nowhere. You can't walk home.

So L. J. Johnson went after dependability. He designed an engine that would *stand up*. He gave it a

float-feed throttle-controlled carburetor to supply a perfect mixture at all speeds and temperatures.

He developed the Quick-Action Magneto to take the place of uncertain batteries.

He worked out a *positive-acting* automatic tilting device and the Johnson shock-absorber drive to prevent damage from submerged obstructions; and a universal steering and reversing mechanism to make the boat quick, easy and flexible to handle.

He kept working at a twin-cylinder design until it was absolutely vibrationless.

That he was right was demonstrated when sportsmen, fishermen and boating enthusiasts bought more Johnson Motors from dealers last year than any other make.

The Johnson Motor is the only motor that can be attached to *any* type boat or canoe without altering the boat. It delivers full 2 horse-power and drives a rowboat from 7 to 9 miles per hour or a canoe from 10 to 12. And with all this

power, flexibility and dependability goes *real portability*, for the Johnson weighs

Only 35 Pounds

It can be carried in a suitcase that fits under a Pullman berth.

Go to the nearest Johnson dealer and get a free demonstration—if you don't know him write us for **FREE** catalog and we will gladly send you his name.

JOHNSON MOTOR COMPANY

860 Sample Street, South Bend, Ind.

Eastern Distributor and Export:
New York Johnson Motor Co., Inc.
4 West 61st Street, New York City, N. Y.

Canadian Distributor:
Peterborough Canoe Company,
Peterborough, Ontario

What the Johnson Motor Does

Makes rowing obsolete by furnishing dependable, inexpensive water transportation.

Opens up distant and unfrequented fishing grounds for the fisherman.

Adds speed and sport to canoeing. When used on small sail boats—even up to 25 and 30 feet—it is absolute insurance against being becalmed.

On yachts—makes every dinghy and tender a motor tender.

Runs errands at the summer cottage or camp—even if "town" is miles away.

Gives you the only really portable marine engine.

Johnson

OUTBOARD MOTORS

GET INTO THE BOAT AND SEE FOR YOURSELF



**Better
—for
Speedsters**

—and It Betters Any Boat!

PEP-ON-THE-THROTTLE, for your snappy speedster! Brute power for business-boat or cruiser! Purring smoothness for the family launch! For every task there's a Wisconsin—the motor that BETTERS any boat!

You'll like its responsiveness, its thrift of fuel and oil, its handiness for those small routine attentions that are all it ever asks of you.

Wisconsin engineering puts owner's comfort ahead of fast production—fitness-for-the-job ahead of factory cost-sheets.

Three models—White Cap "4" and "6" and "A-M." Write for illustrated literature. State length, beam, draft and type boat you wish to power.

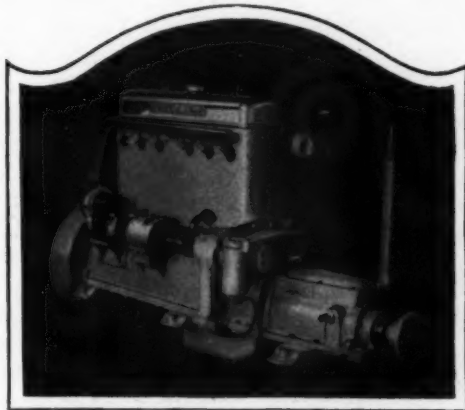
WISCONSIN MOTOR MFG. CO. MILWAUKEE WISCONSIN

White Cap "6"

SPECIFICATIONS

White Cap "6"—3½" x 5", 60 H. P. at 2050 R. P. M. Wisconsin A-M, 4½" x 5½", 54 H. P. at 1400 R. P. M. Paragon reverse gear. Bosch magneto, impulse coupling. Leece-Neville 12-volt starter and generator. Propeller shaft coupling for 1½-inch shaft. Bronze water pump, gear type. Stromberg carburetor. Wiring. Oil pressure gauge. Thermostatic water temperature control.

Prices: White Cap "4", \$795; White Cap "6", \$995; A-M, \$1050.



"BETTER IN ANY BOAT"



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SPLITDORF



Specified for off-shore fleet

Splitdorf SS type Magnetos are specified for the hundreds of Coast Guard boats that have been authorized by the Government for special off-shore duty.

Engined by the Sterling Engine Company of Buffalo, N. Y., and the Consolidated Shipbuilding Corporation of New York City with 6 cylinder, 150 h. p. and 200 h. p. motors, the Government flotilla will depend upon Splitdorf Magnetos for that abso-

lutely dependable ignition that Splitdorf Magnetos render in never failing to give:

The easiest possible starting at lowest cranking speeds;

A hot, fat, sizzling, never-failing spark that just CONSUMES the mixture and minimizes carbon deposit; and

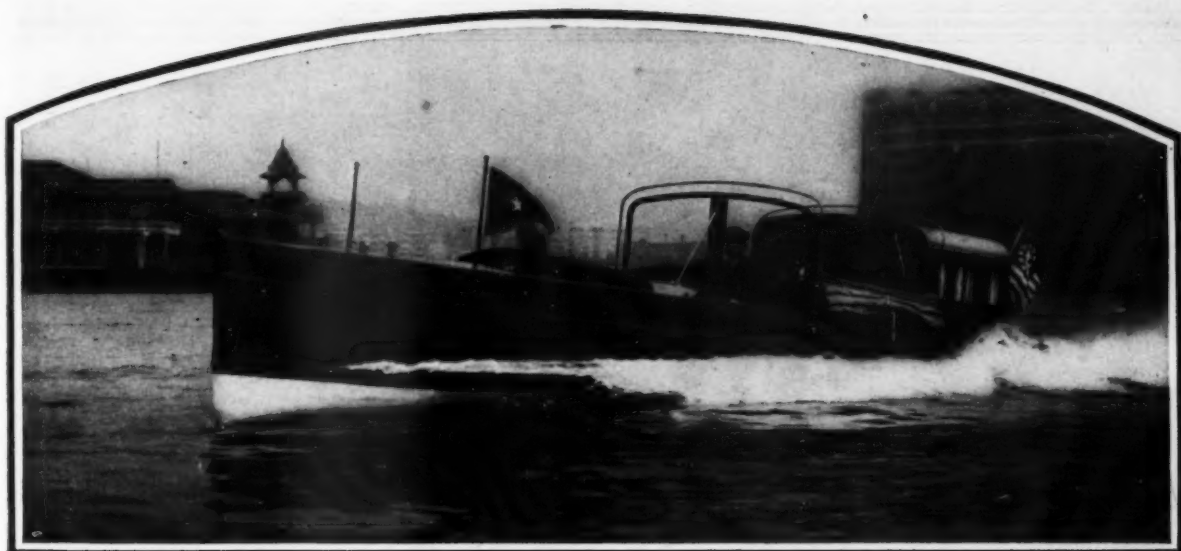
Absolute protection against oil, dust, grease and the natural accumulations found with the best kept motors.

SPLITDORF ELECTRICAL COMPANY

392 High Street, Newark, N. J.



Splitdorf SS Type Magneto



Fast sedan type runabout, as built by the Consolidated Shipbuilding Corporation for fast ferry service between the city and country home

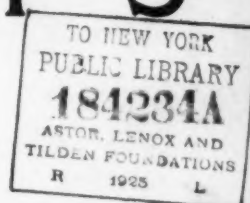
CONTENTS

JULY



119 West 40th Street,
New York, N. Y.

1924



Cover Design by D. C. Hutchinson.

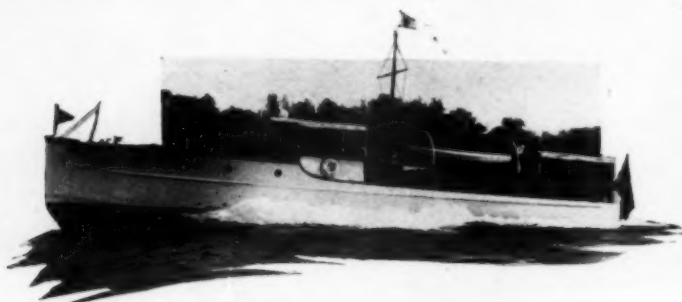
<i>The Call of the Sea.....</i>	13
<i>Chap Says</i>	14
<i>"Boats Never Were a Hobby with Me; They Fitted Perfectly into My Scheme of Life," Says W. C. Ware.....</i>	15
<i>The Robinson Crusoe Syndicate — Part I... 16-18</i>	
<i>Model of H. M. S. Coronation.....</i>	19-20
<i>Art in Dinghy Design.....</i>	21
<i>Commuting: Express Cruiser vs. Railroad... 22-23</i>	
<i>Golden Days Two — An Unusual Fisherman. 24</i>	
<i>Ara, An Ocean Going Yacht.....</i>	25
<i>Huck Says, I Nearly Takes a Sail on Lake Michigan</i>	26-27
<i>The Outboard Motor vs. Aching Muscles; Hard Work, Blisters.....</i>	28-29

<i>How They Race Abroad.....</i>	30
<i>Coot, a 27-Foot Skipjack Schooner.....</i>	31-33
<i>Rinky-Dink, Seven Feet of Boat.....</i>	34-36
<i>Small Motor Boats, Their Care, Construction and Equipment</i>	37-40
<i>Prize Question No. 1: Correcting Faults in Cranky Boats</i>	37-38
<i>Prize Question No. 2: Iceless Icebox for the Boatman</i>	39-40
<i>The Switzerland of the Empire State.....</i>	41-42
<i>Correct Design in Engines.....</i>	43
<i>Husky Engines for Smaller Boats.....</i>	44
<i>Big Chief, a Complete Power Plant.....</i>	44
<i>The East Builds to Race the West.....</i>	45
<i>Yard & Shop.....</i>	46

VOLUME XXXIV

NUMBER 1

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A Great Lakes Commuter

THERE is utility as well as pleasure in boating if you use your boat for daily trips between your home and office. Commuting by motor boat is entirely practical provided you have a boat that combines comfort and dependability with a good turn of speed.

Many Great Lakes craft are regularly used for commuting service. On the Sound, the ocean and the Great Lakes, some of our larger cruisers are used for this purpose. On inland lakes and rivers, a number of Great Lakes runabouts are in similar service.

Whatever the purpose for which you use it, you may rest assured that your Great Lakes cruiser or runabout is the last word in boat construction,—properly designed, carefully built, beautifully finished, reliably powered and thoroughly seaworthy. The boats we have built in the past, and the type of yachtsmen for whom we have built them, are an assurance of these qualities.

Subject to prior sale we can make immediate delivery of runabouts and cruisers in several sizes up to 54 ft. Let us send you details and prices of boats now available.

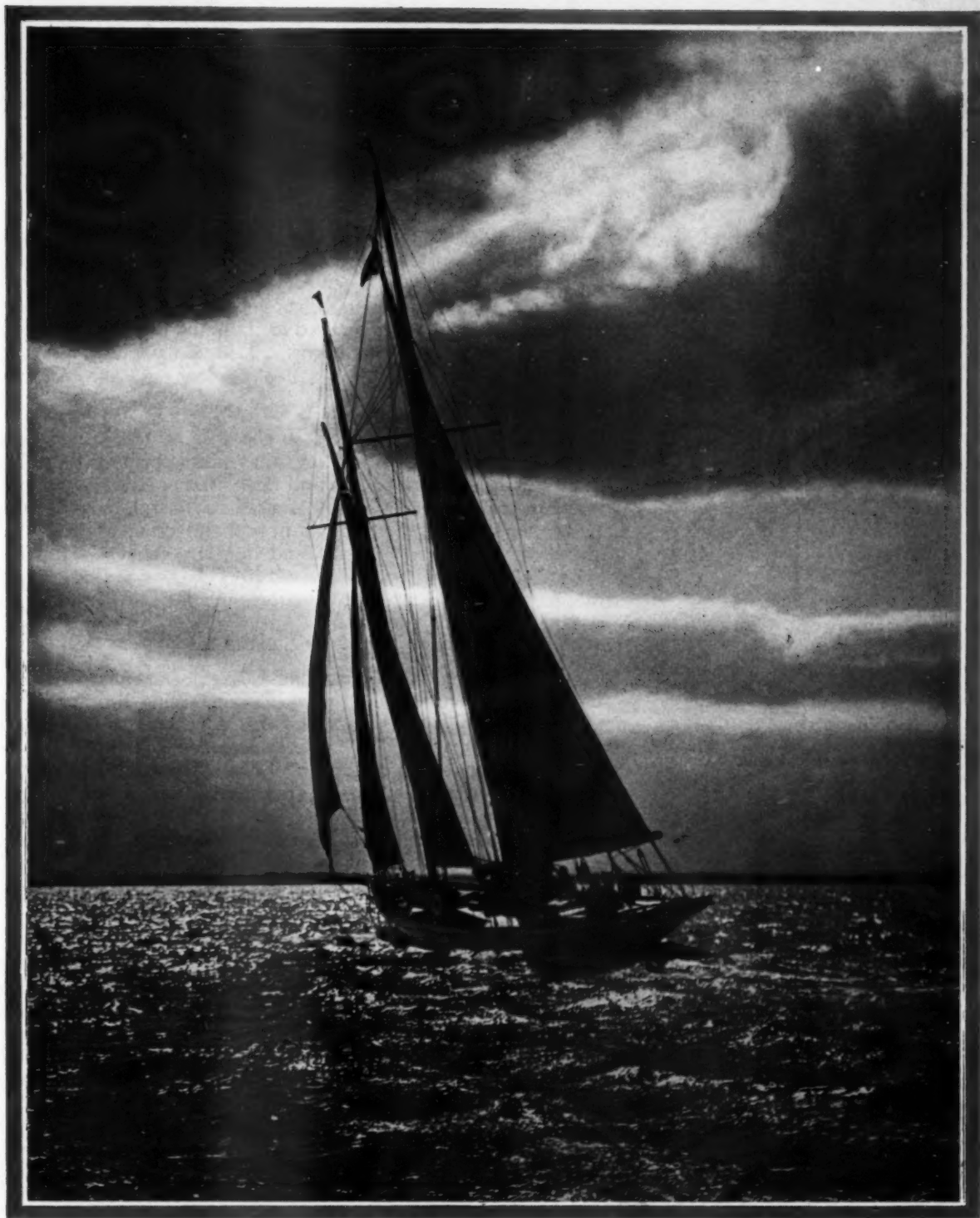
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MILWAUKEE, WISCONSIN

New York Office: 110 East 42nd St.

Telephone 1093 Murray Hill

Telephone the office nearest you to arrange for inspection and demonstration



The Call of the Sea



Gracefully the new schooner yacht Sea Love slides along under the urge of the fresh breezes of Long Island Sound. When these fail there is a heavy duty 12-15 h.p. Sterling engine to help out and insure a return to port. Sea Love was built for J. W. Bird, from designs by John G. Alden and is a real deep sea boat of 62-feet overall length

CHAP Says



Colonel Thomas A. Duff, who recently died at his home at Toronto, Ontario, of angina pectoris. Colonel Duff was a sportsman of highest caliber, intensely interested in all branches of yachting and motor boating. He was an enthusiastic racing man, both of the cruiser and runabout type. For many years he entered his cruiser *Idylise* in the annual Detroit Regatta. His Fisher-Allison Trophy racer *Ionic III* was one of the most wholesome types of boats ever built. Hardly a regatta of importance was held anywhere that Colonel Duff did not attend.

At the last annual meeting of the American Power Boat Association, Colonel Duff with Commodore Greening of Hamilton, Ontario, presented to the Association a Trophy for the Junior Gold Cup Class, which will be known as the Duff-Greening Trophy. Colonel Duff was keenly interested in developing more enthusiasm for boating among the boys and young men and proposed the Junior Gold Cup Class as a means toward the end.



The tax is off but a new menace threatens.

After July third, no one will be required to pay over to Uncle Sam 10% of the cost of his new boat as has been the rule since 1918. This news will be received with words of thanksgiving everywhere. Boats cost enough, goodness knows, without an additional 10% tacked on to be used for building good roads or conducting government investigations. Taxation without representation never was American.

The bill for the reduction of the income and other taxes carried the provision eliminating the motor boat tax. The National Association of Engine and Boat Manufacturers together with many of the Yacht Clubs worked hard and long to have Congress see that the motor boat is not altogether a luxury, as many of the inland members would have us believe. Finally, the Association was successful, the old 10% clause was stricken out, approved by both branches of Congress, and the bill signed by the President.

But with the elimination of one Government nuisance, there came another. This fast and now ever increasing fleet of patrol boats popularly known as Rum Chasers, not content to prey upon the sort of commerce for which it was intended, has evidently decided to hold up every motor craft which travels faster than a mule's pace on the coastwise and tributary waters of our country. Long Island Sound abounds in these hold ups, especially after dark. The inspectors seem to delight in going through the craft from stem to stern, although it is generally evident before the boat is boarded that only law abiding persons are on board, intent on yachting only.

And what is to be the answer: We can not say. It is not nice to advise you what to do as we know the feeling one has when suddenly discovering a craft headed full speed at you, not many boat lengths away, with no lights, not even running lights burning, and then all lights are flashed on and with the search light blinding you, you make out a one-pounder, ready for action if you don't lay-to. There is only one answer.

But the ocean and the sounds and bays and rivers belong to you and me. Most of us are law-abiding and should not be interfered with in the carrying out of our sport and pastime.

We have asked for a ruling as to the legal authority of the Rum Chaser fleet to hold up pleasure craft. So far it hasn't been given to us. If it isn't favorable when received, we'll need your assistance again.

The American motor boat is not to be driven from the high seas.

"BOATS
Never Were
A HOBBY
with Me;
they fitted
Perfectly
into my
Scheme of
Life," says
W. C.
WARE



By NORMAN BEASLEY

THERE are times when I wish that my boyhood education had advanced beyond the stage of being satisfied with a jackknife and a strip of pine.

Looking back into those years and I find that so long as the aforementioned strip of pine was shaped like a boat, carried a pencil-size stick for a mast and had a torn piece of paper in lieu of a canvas sail, I was content. Oh, yes, it was desirable that there be water, although that wasn't entirely essential. I think I did prefer that such water be confined to a wash tub.

Perhaps an experience, which I will relate, had much to do with that thin measure of boating satisfaction.

It was on the morning of threshers' day at my uncle's farm. My brother and I, in company with my cousin, had wended our ways to a young stream. Recent rains had swelled the proportions of the brook so the three of us occupied ourselves shunting three chunks of wood under the bridge. These three noble craft we had named as follows:

Ella Ross, Deseronto, and Varuna.

Those were names lifted bodily from craft plying the Bay of Quinte which, if you are a little lame on Canadian geography, is really a portion of Lake Ontario. The Deseronto was a narrow rakish (Continued on page 64)

The ROBINSON CRU

PART I

By
Peter B. Kyne



AT 6:30 o'clock of the morning of the day following the frightful experience of Commodore Gibney and Captain Scraggs with the cannibals of Kandavu, the members of the Maggie II Syndicate faced each other across the breakfast table with appetites in no wise diminished by the exciting events of the preceding day. Captain Scraggs appeared with a lump on the back of his head as big as a goose egg. The doughty commodore had a cut over his right eye, and the top of his sinful head was so sore, where an earthenware pot had struck him, that even the simple operation of winking his blood-shot eyes was productive of pain. About a teaspoonful of Kandavu real estate had also been blown into Mr. Gibney's classic features when the shells from the Maxim-Vickers gun exploded in his immediate neighborhood, and as he naively remarked to Bartholomew McGuffey, he was in luck to be alive.

McGuffey surveyed his superior officers, cursed them bitterly, and remarked, with tears of joy in his honest eyes, that both gentlemen had evaded their just deserts when they escaped with their lives. "If it hadn't been for the mate," said McGuffey severely, "I'd 'a' let you two boobies suffer the penalty for your foolishness. Any

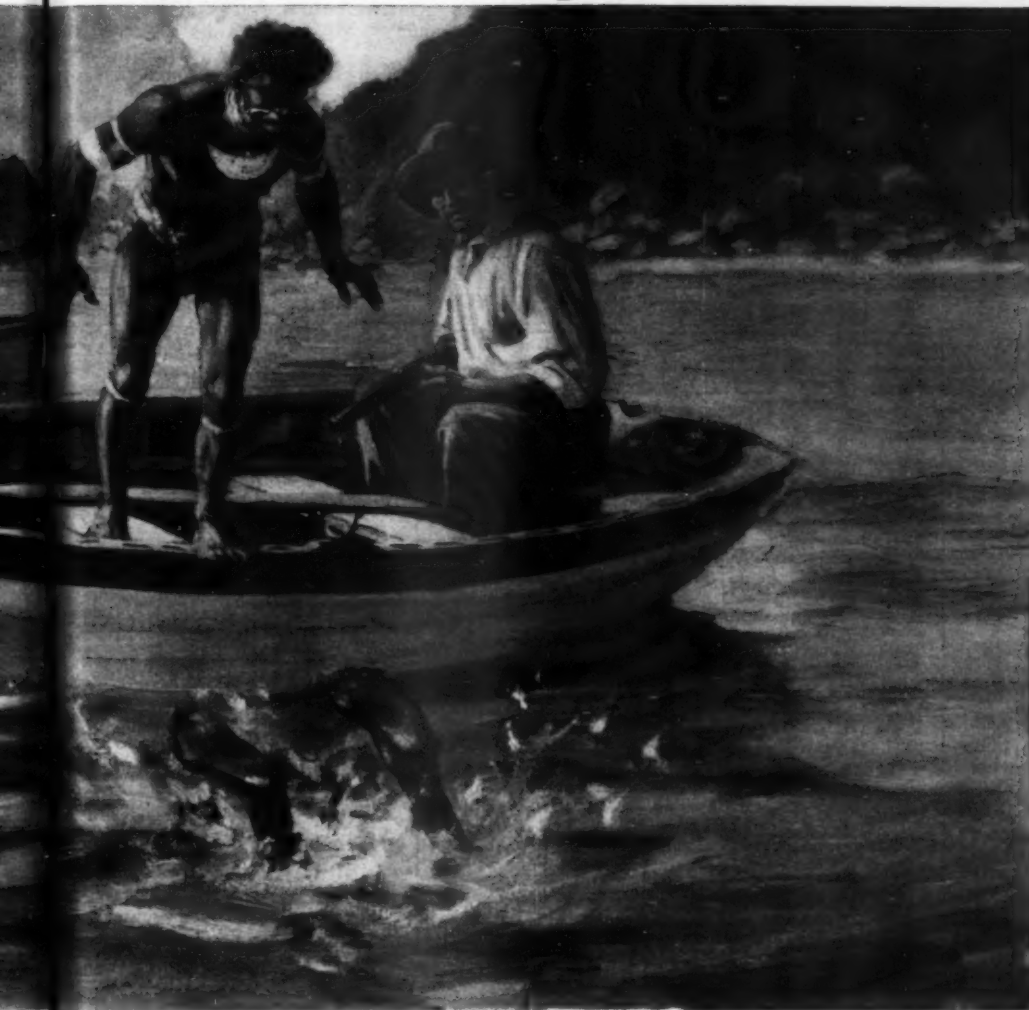
"Over you go, you two smokes," rasped McGuffey, menacing the captain and if a shark comes along and takes a nip out of your hind leg, don't expect n

man that goes to work and fraternizes with a cannibal ain't got no kick comin' if he's made up into chicken curry with rice. The minute I hear old Scraggsy yippin' for help, says I to myself, 'let the beggars fight their own way out of the mess.' But the mate comes a-runnin' up and says he's pretty sure he can come near plantin' a mess of shells in the centre of the disturbance, even if we can't see the wari on account of the jungle. 'It's all off with the commodore and the skipper anyhow,' says the mate, 'so we might just as well have vengeance on their murderers.' So, of course, when he put it that way I give my consent—"

At this juncture the mate, passing around McGuffey on his way to the deck, winked solemnly at Mr. Gibney, who hung his war-worn head in simulated shame. When the mate had left the cabin the commodore pounded with his fork on the cabin table and announced a special meeting of the Maggie II Syndicate.

"The first business before the meeting," said Mr. Gibney, "is to readjust the ownership in the syndicate. Me and Scraggsy's had our heads together, Mac, and we've agreed that you've shot your way into a full one-third interest, instead of a quarter as heretofore. From now on, Mac,

RUSOE Syndicate



Illustrated by
Anton Otto Fischer

captives
g, don't
his rifle. "Dive deep, my hearties, and bring up what you can find,
spect no help from B. McGuffey, Esquire—because you won't get any."

you're an equal owner with me and Scraggsy, and now that that matter's settled, you can quit rippin' it into us on the race question and suggest what's to be done in the case of Tabu-Tabu and this cannibal king that almost lures me and the navigatin' officer to our destruction."

"I have the villains in double irons and chained to the mainmast," replied McGuffey, "and as a testimonial of my gratitude for the increased interest in the syndicate which you and Scraggs has just voted me, I will scheme up a fittin' form of vengeance on them two tar babies. However, only an extraordinary sentence can fit such an extraordinary crime, so I must have time to think it over. These two bucks is mine to do what I please with and I'll take any interference as unneighborly and unworthy of a shipmate."

"Take 'em," said Captain Scraggs vehemently. "For my part I only ask one thing. If you can see your way clear, Mac, to give me the king's scalp for a tobacco pouch, I'll be obliged."

"And I," added the commodore, "would like Tabu-Tabu's shin bone for a clarinet. Penden' McGuffey's reflections on the hampering of crime in Kandavu, however, we'll turn our attention to the prime object of the

expedition. We've had our little fun and it's high time we got down to business. It will be low tide at nine o'clock, so I suggest, Scraggs, that you order the mate and two seamen out in the big whaleboat, together with the divin' apparatus, and we'll go after pearl oysters and black coral. As for you, Mac, suppose you take the other boat and Tabu-Tabu and the king, and help the mate. Take a rifle along with you, and make them captives dive for pearl oysters until they're black in the face——"

"Huh!" muttered the single-minded McGuffey. "What are they now? Sky blue?"

"Of course," continued the commodore, "if a tiger shark happens along and picks the niggers up, it ain't none of our business. As for me and Scraggsy, we'll sit on deck and smoke. My head aches and I guess Scraggsy's in a similar fix."

"Anythin' to be agreeable," acquiesced McGuffey.

After breakfast Commodore Gibney ordered that the prisoners be brought before him. The cook served them with breakfast, and as they ate, the commodore reminded them that it was only through his personal efforts and his natural disinclination to return blow for blow that they

were at that moment enjoying a square meal instead of swinging in the rigging.

"I'm goin' to give you two yeggs a chance to reform," concluded Mr. Gibney, addressing Tabu-Tabu. "If you show us where we can get a cargo of black coral and work hard and faithful helpin' us to get it aboard, it may help you to comb a few gray hairs. I'm goin' to take the irons off now, but remember! At the first sign of the double-cross you're both shark meat."

On behalf of himself and the king, Tabu-Tabu promised to behave, and McGuffey kicked them both into the small boat. The mate and two seamen followed in another boat, in which the air-pump and diving apparatus was carried, and Tabu-Tabu piloted them to a patch of still water just inside the reef. The water was so clear that McGuffey was enabled to make out vast marine gardens thickly sprinkled with the precious black coral.

"Over you go, you two smokes," rasped McGuffey, menacing the captives with his rifle. "Dive deep, my hearties, and bring up what you can find, and if a shark comes along and takes a nip out of your hind leg, don't expect no help from B. McGuffey, Esquire—because you won't get any."

Thus encouraged, the two cannibals dove overboard. McGuffey could see them pawing around on the bottom of the little bay, and after half a minute each came up with a magnificent spray of coral. They hung to the side of the boat until they could get their breath, then repeated the performance. In the meantime, the mate had sent his two divers below to loosen the coral; with the result that when both boats returned to the Maggie II at noon Captain Scraggs fairly gurgled with delight at the results of the morning's work, and Mr. Gibney declared that his headache was gone. He and Captain Scraggs had spent the morning seated on deck under an awning, watching the beach for signs of a sortie on the part of the natives of Kandavu to recapture their king.

Apparently, however, the destructive fire from the pom-pom gun the night before had so terrified them that the entire population had emigrated to the northern end of the island, leaving the invaders in undisputed possession of the bay and its hidden treasures of coral and pearl and shell.

For nearly two weeks the Maggie II lay at anchor, while her crew labored daily in the gardens of the deep. Vast quantities of pearl oysters were brought to the surface, and these Mr. Gibney stewed personally in a great iron pot on the beach. The shell was stored away in the hold and the pearls went into a chamois pouch which never for an instant was out of the commodore's possession. The coast at that point being now deserted, frequent visits ashore were made, and the crew feasted on young pig, chicken, yams, and other delicacies. Captain Scraggs was almost delirious with joy. He announced that he had not been so happy since Mrs. Scraggs "slipped her cable."

At the end of two weeks Mr. Gibney decided that there was "loot" enough ashore to complete the schooner's cargo, and at a meeting of the syndicate held one lovely moonlight night on deck he announced his plans to Captain Scraggs and McGuffey.

"Better leave the island alone," counselled McGuffey. "Them niggers may be a-layin' there ten thousand strong, waitin' for a boat's crew to come prowlin' up into the bush so they can nab 'em."

"I've thought of that, Mac," said the commodore a trifle coldly, "and if I made a sucker of myself once it don't stand to reason that I'm apt to do it again. Remember, Mac, a burnt child dreads the fire. To-morrow morning, right after breakfast, we'll turn the guns loose and pepper the bush for a mile or two in every direction. If there's a native within range he'll have business in the next county and we won't be disturbed none."

Mr. Gibney's programme was duly put through and capital of Kandavu looted of the trade accumulations of the years. And when the hatches were finally battened down, the tanks refilled with fresh water, and everything in readiness to leave Kandavu for the run to Honolulu, Mr. Gibney announced to the syndicate that the profits of the expedition would figure close up to a hundred thousand dollars. Captain Scraggs gasped and fell limply against the mainmast.

"Gib, my dear boy," he sputtered, "are you sure it ain't all a dream and that we'll wake up some day and find that we're still in the green-pea trade; that all these months we've been asleep under a cabbage leaf, communin' with potato bugs?"

"Not for a minute," replied the commodore. "Why, I got a dozen matched pearls here that's fit for a queen. Big, red, pear-shaped boys—regular bleedin' hearts. There's ten thousand each in them alone."

"Well, I'll—I'll brew some grog," gasped Captain Scraggs and departed forthwith to the galley. Fifteen minutes later he returned with a kettle of his favorite nepenthe and all three adventurers drank to a bon voyage home. At the conclusion of the toast Mr. McGuffey set down his glass, wiped his mouth with the back of his hairy hand, and thus addressed the syndicate.

"In leavin' this paradise of the South Pacific," he began, "we find that we have accumulated other wealth besides the loot below decks. I refer to His Royal Highness, the king

of Kandavu, and his prime minister, Tabu-Tabu. When these two outlaws was first captured, I informed the syndicate that I would scheme out a punishment befitin' their crime, to-wit—murderin' an' eatin' you two boys. It's been a big job and it's taken some time, me not bein' blessed with quite as fine an imagination as our friend, Gib. However, I pride myself that hard work always brings success, and I am ready to announce what disposition shall be made of these two interestin' specimens of aboriginal life. I beg to announce, gentlemen, that I have invented a punishment fittin' the crime."

"Impossible," said Captain Scraggs.

"Shut up, Scraggs," struck in Commodore Gibney.

"Out with it, Mac. What's the programme?"

"I move you, members of the syndicate, that the schooner Maggie II proceed to some barren, uninhabited island, and that upon arrival there this savage king and his still more savage subject be taken ashore in a small boat. I also move you, gentlemen of the syndicate, that inasmuch as the two aggrieved parties, A. P. Gibney and P. Scraggs, having in a sperrit of mercy refrained from layin' their hands on said prisoners for fear of invalidin' them at a time when their services was of importance to the expedition, be given an opportunity to take out their grudge on the persons of said savages. Now, I notice that the king is a miserable, skimpy, sawed-off, and hammered-down old cove. By all (Continued on page 94)

GOOD NEWS

Beginning with the next issue of MoToR BoatinG we will publish the first of a new series of cruising stories by Alfred F. Loomis, who, it will be remembered, took the little auxiliary yawl Hippocampus on her adventurous voyage through the Panama Canal. Mr. Loomis sailed for England early in June and has embarked on Adrasta, the well appointed English yawl, which will be his home during an extended cruise through the Solent, and along the British Coast. He will make short runs and become thoroughly acquainted with the harbor and shore life of our English yachting cousins, and report his adventures for you. If time permits he will visit Jersey and Alderney, and also stop in at Cherbourg, cruising from there along the French coast, making further stops as the inclination strikes him.

The boat which he is using is a comfortable seaworthy craft, fitted with all the newest English gear for sail handling which is strange to Americans. In addition there is a further novelty for American readers in the form of a four cylinder sleeve valve Kelvin engine, the reports of whose behavior should prove interesting.

Model of H. M. S. CORONATION

*Superb Example of The Finest
Period of English Ship Model
Building Follows Its Sister
Ships to America*

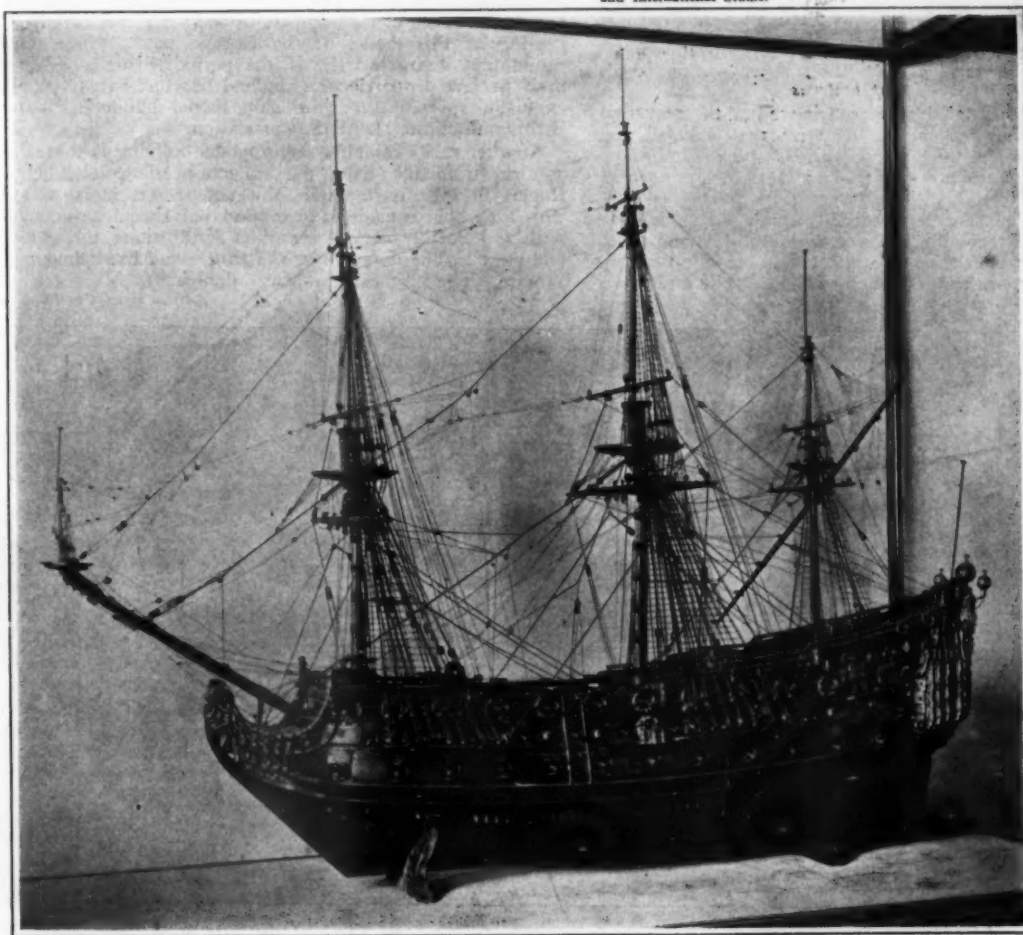
By WILLIAM B. McCORMICK

ONE by one and some times by twos and threes, or even in a still more numerous group, as in the case of the Cuckfield collection, England is losing many of her famous ship models to amateur collectors in the United States. Much stress has been laid in recent years on the acquisition by Americans of great British paintings and books from distinguished British libraries. But through the regrettable anomaly in our national thought that we pay little attention to the sea and ships, in spite of the wealth and fame accruing to us from both, small notice has been given in print to the coming to our shores of these English ship models. This anomaly is easily understood if we perceive our limitations regarding the recognition of economics in relation to social as well as political history. If this recognition were more general, particularly in the weighing of what is news, it might be



Bow view of the model of H. M. S. Coronation showing the elaborately carved figurehead

Courtesy of Charles of London and International Studio.



View of the side of the model of H. M. S. Coronation showing the details of frames and other construction



Stern view of the model of H. M. S. Coronation note the elaborate carving and gilding as well as the large poop lanterns

seen that in these English ship models we had the representations, of the sources of the fortunes that enabled many Britons to assemble great art collections and great libraries, of Britain's great sea-carrying trade, and of Britain's security on the sea.

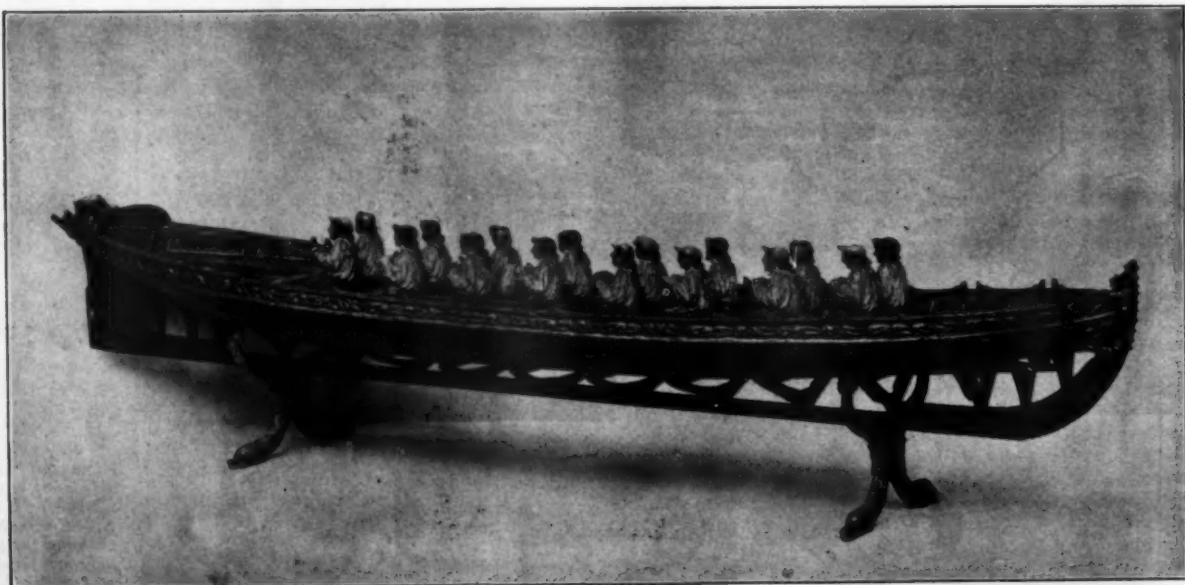
Ship model building, as studied through old models, is a fascinating and recondite art. It will require none of this however, for anyone to appreciate the grace, the beauty of the ship itself, and the application of the carver's and gilder's

Photograph Courtesy of Col. H. H. Rogers

crafts to the latest one of these models to reach the United States, that of H. M. S. Coronation, on exhibition in the New York gallery of Charles of London. To place the warship historically it must be mentioned that she was built at Portsmouth in 1685 by Isaac Betts, she was of 1,366 tons, carried ninety guns, and was the flagship of Sir Ralph Deleval who commanded the rear division of the combined British and Dutch fleet which was defeated by the French under Tourville in the battle of Beachy Head, fought June 30, 1690. The Coronation ended her career in 1691, when she was wrecked near Plymouth. The model, which is now in America, was formerly the property of James, Duke of York, Lord High Admiral of England, who subsequently became James II of England.

As the model stands in its glass case it is a veritable gem of seventeenth-century model making, an era when ornamentation was lavished on navy ships. From waterline to rail, from figure-head to poop lanterns, carving and gilding was used unsparingly on these warships. This model shows traces of Mediterranean influences in hull and rigging in the low bow with its magnificent figurehead and other ornamentations of carving and gilding, its high stern, with the quarter and stern galleries carved, painted and gilded with Renaissance gorgeousness, its lateen yard on the mainmast, sprit topmast, and its three poop lanterns, which here are distinctly bulbous. Gilded carvings and paint sparkle along the hull and on the upper decks. The gun ports along the upper decks are encircled with exquisitely carved and gilded wreaths, the opened port shutters below have lions' heads painted against scarlet backgrounds, the entry-ports are solid masses of gilded carving, and the breaks of both the poop and quarter-decks are masses of heavy carved woodwork gilded to the point that the surface still twinkles under artificial light. As was the custom in the making of these models a considerable part of the hull below the waterline was left unplanked to enable the frame construction to be seen and much of the deck was left in the same condition. The rigging of this model of the Coronation is faultless, the round tops characteristic of the period, being notable for their perfect proportions. England has lost to us few such exquisite specimens of the ship model builder's craft as is this one of the H. M. S. Coronation.

Another rare example of ship model building is that of the admiral's pinnace from the collection of Colonel H. H. Rogers in the Metropolitan Museum of Art in New York. This little boat is made of pearwood, polychromed and gilded, with a delicately carved acanthus scroll along the gunwale and stern. The oarsmen are in shorts and the helmsman in a tunic. The cradles represent dolphins.



This model of an admiral's pinnace from the collection of Charles Sergison, Clerk of the Acts of the British Navy from 1689 to 1718, was included in the number of fine models recently acquired by Colonel H. H. Rogers.

Art in DINGHY

Design

An excellent dinghy which must be very light in weight or else the good looking gentleman would be unable to hold it so still



ONE of the first problems which meet the Motor Boatman and Yachtsman is that of the small rowing tender. On the large Yacht, of course, where size and weight of the small boat is of little moment, a tender may be selected from stock almost at will.

On the small cruiser, however, the question is not easily settled. Weight, naturally, is a limitation which cannot be foregone and very few builders have established a reputation for designing and building dinghys suitable for this service. In addition to light weight, the dinghy must be good looking, graceful, have good carrying capacity and above all be staunch and seaworthy.

Dinghy construction is an art in itself. Nowhere in the boat building industry is skill and craftsmanship more in evidence than in small boat construction. Every piece of material, every joint, screw, rivet and fitting is in plain view. Paint and putty play no part in the finish of this class of boat. The spar varnish used in the finishing of them magnifies poor workmanship rather than cover up the mistakes of unskilled workmen.

In these times when fast ferries and light high speed cruisers have become so popular, the specialization on dinghys and light motor driven tenders for this service is a natural development. The tenders and dinghys as designed and built by the Consolidated Shipbuilding Corporation more nearly approach perfection than any others we have seen. As an example of their mastery, we have reproduced several photographs which show an 8½-foot dinghy weighing 85 lbs. This boat is copper riveted throughout, save at the stern and transom where brass screws are used as fastenings. Butternut which is lighter than mahogany and as attractive, is used for trim.

Bow view of the Consolidated dinghy showing its fair lines and symmetry



Bottom view showing the broad bearing aft and the little bilge drain opening

Commuting: Express



George H. Townsend runs his Sazarac more than 10,000 miles during the season in commuting between his home and office

How Many are Learning to Get More Enjoyment Out of Life Without Interfering with Business

sense of comfort, speed, health, ease, cleanliness, and a hundred more descriptive terms, too apparent to mention.

The way George H. Townsend has chosen to live, thirty miles outside of New York City, and made use of his 54-foot express cruiser to take him into town every morning and back in the evening, is but typical of what others similarly situated are now doing and the way thousands of others should be doing and would be if they had a chance to make a trip with Mr. Townsend that they might see for themselves or else hear him talk for a few minutes, enthusiastically describing how it's all done.

The fun Mr. Townsend gets out of it all is but a side issue as is the pleasure his friends have too.

Mr. Townsend is President of the Boyce



A crew of two is sufficient for an express cruiser large enough for commuting purposes. On the left is Captain Gillett of Sazarac with his mate on the right

COMMUTING de Luxe is not a strong enough expression to describe the way which is becoming quite common this summer for many New Yorkers whose homes are on or near Long Island Sound to get to and from their business daily.

We would not call it exactly luxury to commute back and forth in one's fast motor cruiser every day between his place of business and residence, separated by a distance of from twenty to forty miles, but it is luxurious in the

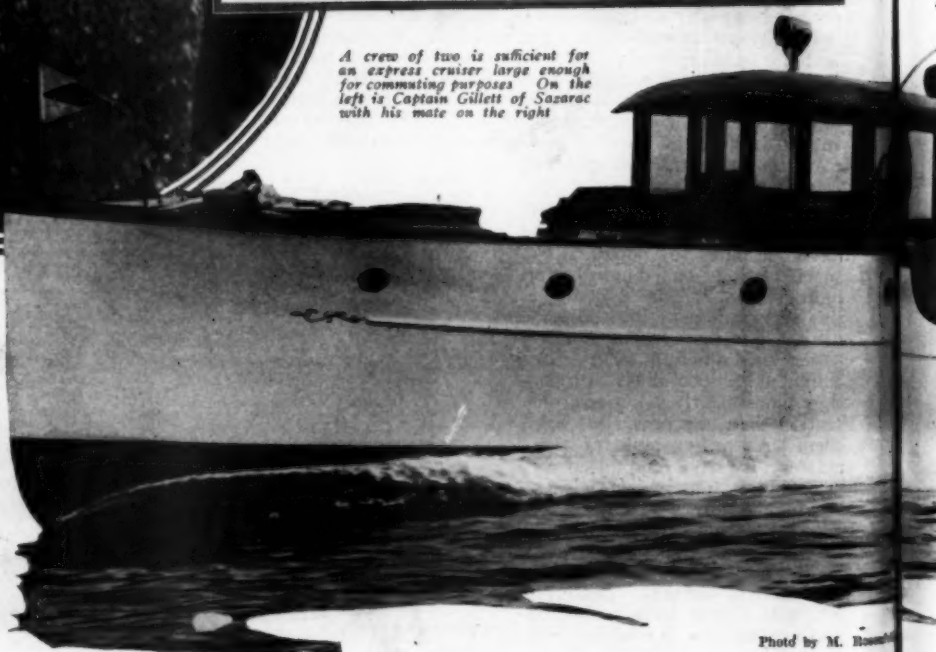


Photo by M. Rosen

Cruiser Vs. Railroad



Moto-Meter Company whose plant is located at Long Island City. He has always been fond of the water, a boat fan perhaps, but one who has generally lived, until recently, so far from the sea that he never had a chance to practice the more complex side of navigation, except from books. So Mr. Townsend does not exactly fall into the class of an expert. His craft is a 54-foot standardized express cruiser, named Sazarac, built by the Great Lakes Boat Building Corporation and powered with two six-cylinder Hall-Scott marine engines. This combination makes an ideal outfit for the commuting express.

Sazarac goes into commission in early March and continues her daily runs, which in mileage averages about
(Continued on page 126)

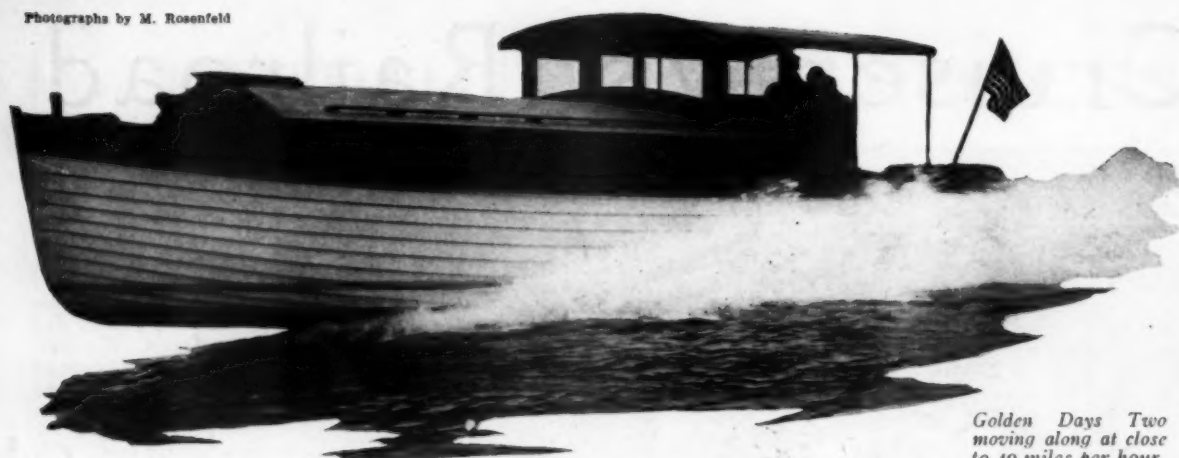
One of the most pleasant features of using an express cruiser for commuting purposes is the advantage of being able to take your friends and neighbors along with you and have plenty of company while coming into town. The above illustration takes in the after cockpit of Sazarac, left to right: Wilbur H. Young, Matthew Rock, George H. Townsend, William Webber



Mr. Townsend arriving at the Indian Harbor Yacht Club, Greenwich, Connecticut, aboard his motor yacht. The yacht club attendants help bring the boat alongside the float

Sazarac, a 54-foot standardized Great Lakes express cruiser, powered with two Hall-Scott motors

Photographs by M. Rosenfeld



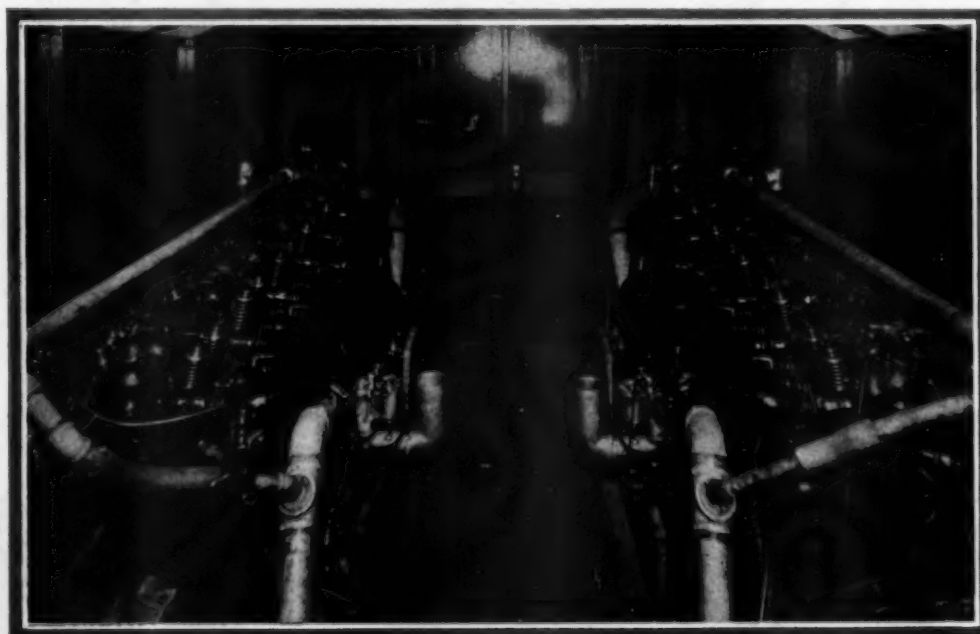
Golden Days Two moving along at close to 40 miles per hour

GOLDEN DAYS TWO—An Unusual Fisherman

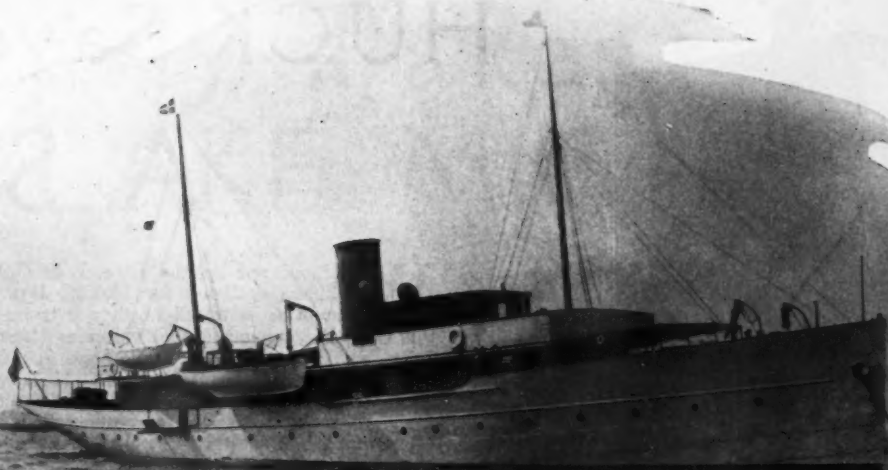
FOLLOWING the tendency of modern times which demand above all, speed and endurance, the new 35-foot fishing cruiser Golden Days Two is an exceptional craft. This boat has recently been completed for Colonel James Elverson, Jr. of Philadelphia from designs by E. Lockwood Haggas of Atlantic City. Among the particular requirements of the owner in planning the boat was that she should be of exceptional speed with the greatest possible measure of seaworthiness and dependability. The builder, Hubert S. Johnson in his shops at Bayhead, N. J., has turned out a very excellent product. The general appearance of the hull follows the popular present day style of Florida fishing craft and is of the lapstrake type of construction. In addition the frame and structural members are all selected material, making the boat a thoroughly dependable craft under all conditions of weather.

High Speed and Dependability Are Combined In A Remarkable Degree In The 35-Foot Speedster Recently Completed for Colonel James Elverson, Jr.

In order to secure the desired speed in a boat of this size, there were specified for the power plant a pair of the high speed type Detroit Marine Aero engines. These machines are capable of turning 20 by 30-inch Columbia propellers at 1,750 revolutions. At this speed the hull is driven at 38.8 m.p.h. and it is expected that some minor refinements and adjustments will later permit of the boat reaching 40 miles. For a hull which is 35-feet long and 10-feet wide, this speed is exceptional since no particular effort was made to trim unnecessary weight or sacrifice strength. These engines which have demonstrated their ability in numerous fast boats are of superior design and workmanship, light in weight, and economical in fuel. They are being built in a high speed and a heavy duty type. These will develop 300 h.p. in one case and 235 in the other at their maximum revolution rate.



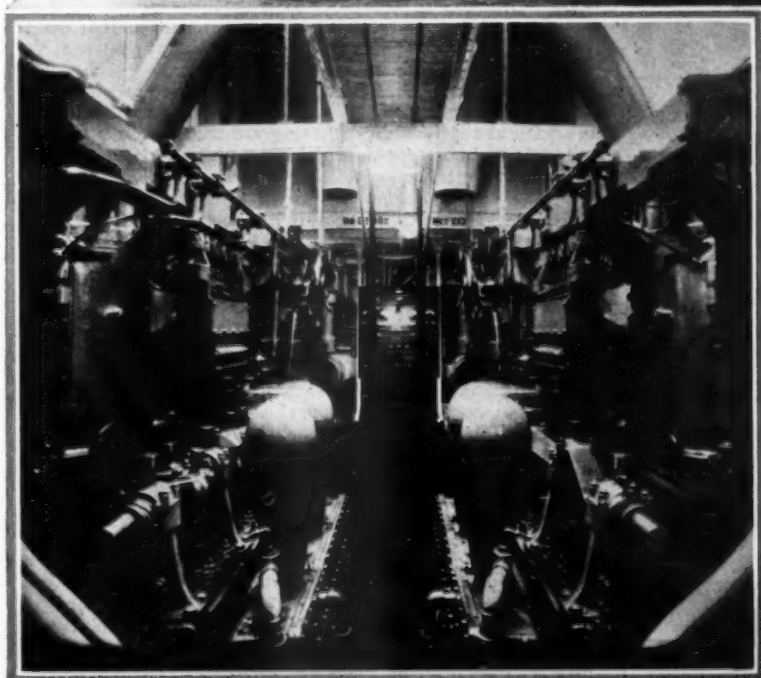
The engine room of Golden Days Two showing the relatively small space occupied by the two 300 h.p. Detroit Marine Aero engines of the Fiat Type



Ara, An Ocean Going Yacht

*Elaborate Vessel of
The Deep Sea Type
Equipped With Twin
Winton Diesel Engines*

Ara was built for Ernest B. Dane, of Boston, and is a powerful steel vessel 165 feet in length, her beam is 24 feet and for her size she is one of the most completely equipped pleasure yachts afloat. Her power plant consists of two six-cylinder Winton Diesel engines of 12 15/16 by 18-inch bore and stroke developing 400 h.p. each

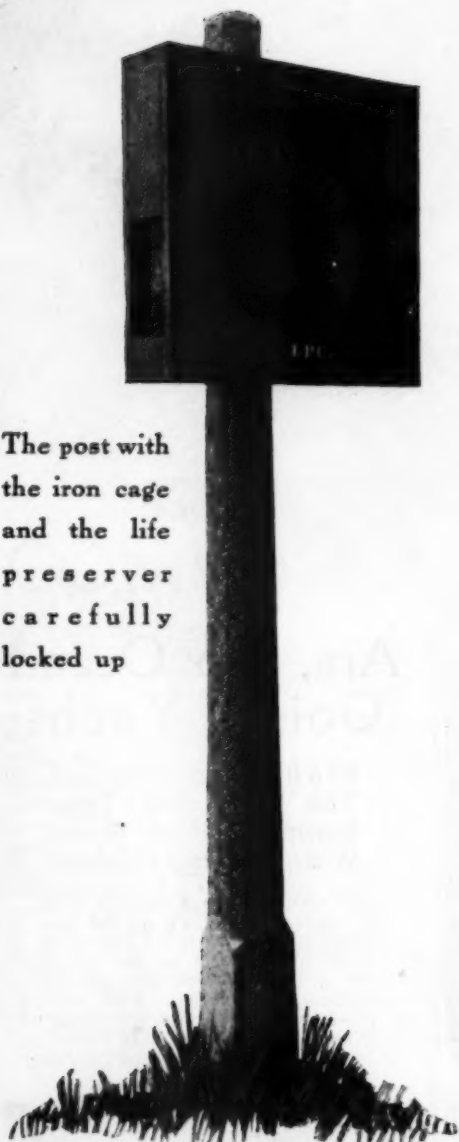


The quarters of the owner on board Ara are magnificently fitted up as the illustration of the main lounge and smoking room shows. The staterooms, owners' and guests' quarters are equally attractive and the decorations and furnishings have been tastefully selected



HUCK Says I A Sail

The post with
the iron cage
and the life
preserver
carefully
locked up



AN OPEN LETTER TO HUCK IN THE EDITOR'S MAIL

Dere Huck: : : :

Wen i see yure mellodens face in MoToR BoatinG i at once
not i hav met with a man ov equal branes to min so i reads yure
article, wich i shud never dun, bein yu used so many technickie
turns. Now there is no use in beating around the bush as
nuthin can be gained by sich conduct. Wat i want to no is wat is
agin 3 uv us fellers down hear in Oklahoma, being a probium
no great importance. THE BILDING UV A BOTE.

Wel us fellers got together and decided we wud bild a
canoo, but as yure article appeared on the sene it caused
a absolute riote on the sene, out ov wich wun ov us got a
misplaced i-brow. the reason was that we wer tring to settul
wich to tak, yure bote or a canoo. now please tak thes questions
frum a landlubber uv the prairies and anser them to the best
ov yure ability. Wear dos the driver sit in yure bote? how many
doz it hold? Wud yu please send us The dek plans? yu no
thet we fellers down hear hav nt the kontack thet yu fellers
with the gentel art ov bote bilding, so we caint vizzualize the
propposition as yu fellers can. in ordur thet yu can anser us
intelligintely i will giv yu a discripshun ov the water here-
abouts—we hav a few lakes, very small ones, about 3 blocs
square, a few trickies caled streams, about 2 inches deep, and 2
rovars. thes rivers raing frum 3 inches 2 ate feet in spots.
the ar very swift an at presint hav a few skows on it in the
holes. thes skows wer bilt to represint ro botes, but ar
usually propelled by paddels. yu hav the facks ov the cas so i
wish yu wud reply as some as possibel, and prevent any mor
riotes.

allwas yure frend,
HANK
H. W. H., Jr., Oklahoma, Okla.

WELL, Chap, by the time I gets the six footer
Guava designed for MoToR BOATING, which I
suppose some fellers, they is trying to build it by
this time, I is exhausted, and I decides I needs a rest, and
I begins to think—which you knows is a hard thing for
me to do—and I says to myself, "Huck, you has never
been west of East Cambridge. Why doesn't you do what
Horace Greeley advises those young fellers to do when he
was editor of MoToR BOATING?" And so I gets hold of
a map of the United States and I sees that the largest body
of water this side of the Pacific with a hotel on it, it is
Lake Michigan, so I decides to go to Chicago for a rest,
not forgetting that they is a young woman in that town
what I knows, what dances like these Nimps you sees in
the Rotarygravver part of the Sunday paper.

The only train that I ever hears about what goes that
way, it is the 20th Century so I buys a ticket and then finds
out afterwards that they charges me ten dollars extra for
a few knots more speed, which they gives back at a dollar
a hour if the train is late, so I knows it will be on time
which it is and I doesn't get nothing back at all. At
Worcester or somewheres a feller gets aboard what is a
regular rough neck. He has a bad cold and he coughs in
my face to prove it and he informs me he is afraid he gets
newmonia if somebody doesn't give him a drink. I think
he is hinting but does I look like a Scofflaw what would
violate Mister Volstead's idea of how the rest of the world
should live just because he is on the wagon, and anyways,
does the big stiff thinks I gives a perfect stranger any,
even if I has anything to keep me from catching a cold
myself? I never sees such nerve. He finds I does nothing
for his croup so he turns to a cheerful subject and tells as
how they kills a bunch of people on this same train a
coupla weeks ago.

As I finds his monnalogos depressing, I goes forrard to
see if they is any American citizens on the New York part
of the train they hooks us onto at Albany but the results,
they is disappointing. Nowheres does they speak much
English. A lot of them, they talks with their hands and
the rest they talks just plain dago. The only words I
understands anywheres, they is all on the same subject—
the liquor, it ain't so good in Chicago as in New York—
they is thinning out the good stuff with Cuban alcohol
—this feller, he knows a reliable bootlegger, and that
feller, he fills up his chest with wind and makes a speech
to anybody what will remain and listen and says as how
he thoroughly believes in prohibition because he gets his
licker all right, he does, but it keeps the poor laborer from
getting his and that is his idea for making the world safe
for the democratic party and I decides that they is all a
lot of hippercrits and I has to go out on the after deck and
gets some air. Then I turns in and every time they changes
engines, the Brotherhood of Locomotive Engineers, they
shows what they thinks of the public by ramming at full
speed, and a feller over on the starboard side, he snores
like the foghorn on the Rockland Breakwater. Otherwise
I has a perfect night.

The only hotel I knows about in Chicago, it is the Edge-
water Beach because I hears it frequent on the radio, so
I charts a taxi and we starts off about N 3/4 W and rides
until I thinks we must be just this side of the Rockies and
as we finally pulls up at the hotel, I notices that the meter
it moves along another twenty cents as usual.

I unpacks my toothbrush and goes down to what I sup-
poses is the dining room but I soon finds I am surrounded
by a large school of the fattest women I ever sees outside

Nearly Takes on LAKE MICHIGAN

of a circus. They is not only eating but they is playing cards at the same time. I is fascinated by one table of four of not less than one thousand pounds of feminascity, and as they has et all they can hold they is grouting up the chinks with candy. I understands it was a charity buzzer. So I goes below to a place where they eats dainty and has tea and toast and prays for leanness. That night, while I is dancing one of those Junoes, she sails down before the wind and steps on my foot and I may get over it, but I never looks the same. And the next day, I sees a shop marked, "Gowns for the Larger woman" and I sees a dress in it what I could get into four times and I says to myself "Ain't nature wonderful?"

Everytime I rides downtown on the hurricane deck of a bus, I sees a yacht club with a lot of boats moored off of it and I gets my eye on a sweet little fifteen footer, so I addresses a letter to any officer of the club telling him what a great man I is and I wants to borrow the boat. I walks down to the clubhouse carrying my stick so I looks highly respectable-like and gives it to the manager. He reads it and he rolls his eye shocked-like, just as if he hears that Deacon Jones what always lives such a perfect life, he gets drunk down to the firehouse last night, and he says it ain't fittin' etiquette to sail a boat in Chicago before May 30th and if you does you is almost ostrichized. But I pacifies him and says never mind and to deliver the letter to a officer of the club anyways. Now I waits all the week expecting any minute that they marches up here with a brass band to say the laws they is repealed in my favor and to present me with a sterling silver bilge pump but nothing happens at all, so I guess they hasn't heard how I ran the races in Miami or something.

I rallies from this disappointment when I notices that they is a big sign on the beach what says "NO SWIMMING" and right back of it a post with a iron cage and a life preserver in it, all locked up safe. They has a sense of humor after all. I suppose that if anybody can't read and goes in the water and gets over their head, that you tells them to hold everything and you applies for a permit to the proper authority for a key to unlock the life preserver. I guess they has to keep everything locked up in Chicago or somebody steals it and I suppose the system it is all right, only the bather, he is apt to drown in the meantime.

About the time I gets reconciled to the idea of not having a trip on their near-ocean, I sees a raceabout piping along with her rail awash, and I runs along the shore and sees her put into a place what has a sign saying "Cycle and Saddle Club". While I doesn't see how this has anything to do with boats, I notices a lot of them on the shore, I speeds back to the hotel and says to the haughty person behind the desk "I wants to borrow a sailboat at the Cycle and Saddle Club. How does I do it?" He gives me the

glassy stare and says as how this club it is one of the oldest and most exclusive in Chicago and I says that was nothing in my life as I belongs to the Eastern Yacht Club what was organized before they hears of bicycles or business cycles and when saddles, they was in their infancy and that the members they was perfect (Continued on page 68)



I notices that they is a big sign on the beach what says NO SWIMMING. They has a sense of humor after all. I suppose that if anybody can't read and goes in the water and gets over their head, that you tells them to hold everything and you applies for a permit to the proper authority for a key to unlock the life preserver.

The Outboard Motor V

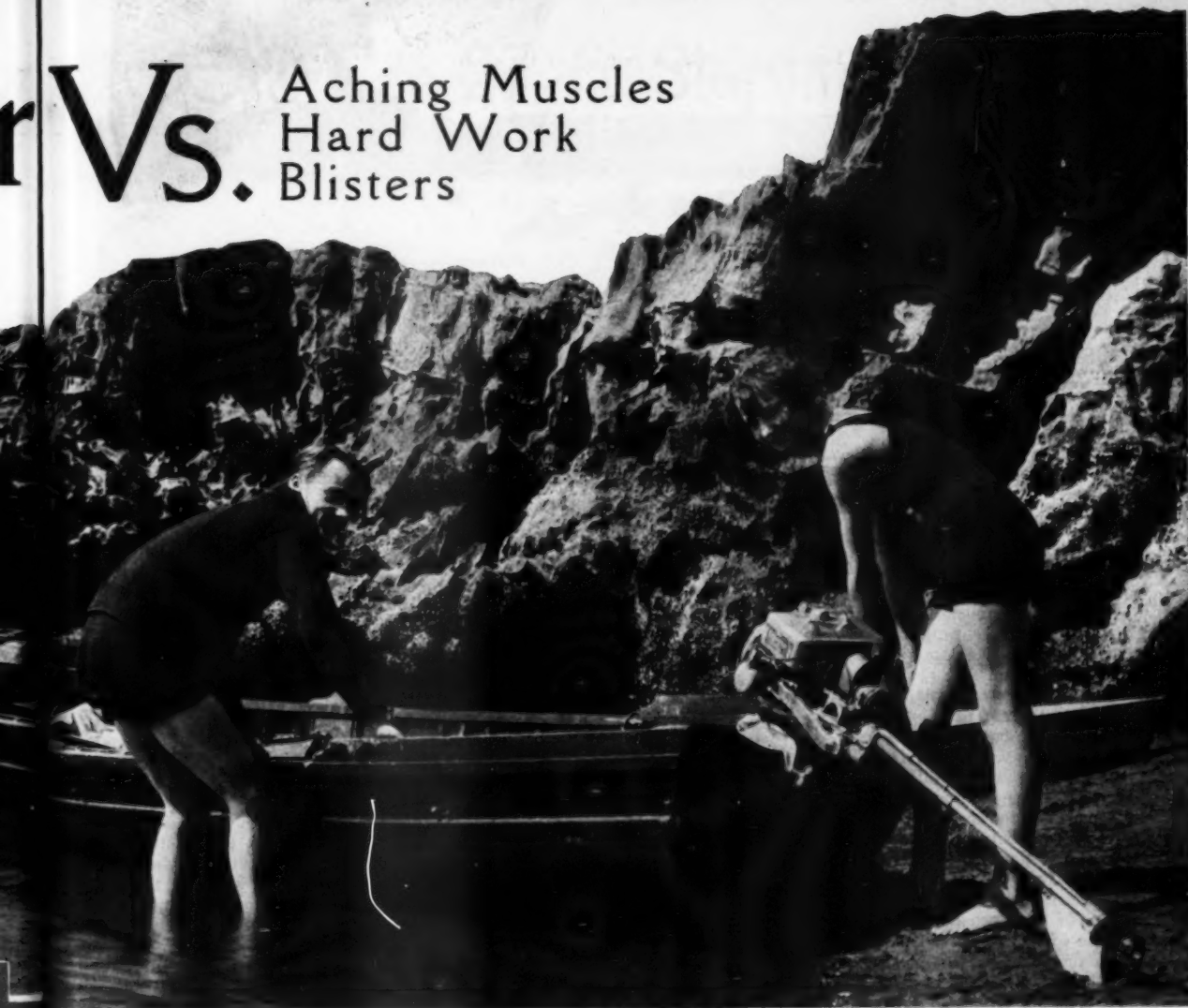


A juv. pike and redhead brought down far away from the camp where rowing through the weeds and shoal spots would have taken all day, and many bottles of arnica to alleviate aching muscles



In the narrow places which are almost too shallow to permit rowing—where there is just enough water to float the boat, the little direct drive outboard engine takes you through just the same

r Vs. Aching Muscles Hard Work Blisters



Photographs by Hong & Ford

The ability to attach the motor to the boat while ashore and start off bow first is often a great convenience. Particularly in tide water where varying levels often complicate the launching of a boat. The best bathing beaches are quickly reached with the help of the little engine

To reach the duck blind the boat was run for miles through shallow waters. The location is such that it is entirely too far to reach by rowing and the waters so shallow that it is difficult to make progress except by means of the little engine which does the work surely and quickly



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Marcel Jalla, in his Yzomona II making a fast lap of the course at Cannes

Photographs by
A. Barreau, Cannes



HOW THEY RACE ABROAD

FOR once that much abused term, International meant something. The recent motor boat meeting at Cannes on the French Riviera was surely as international in character as an event of this kind can be in this most cosmopolitan of places. Entries were received from owners representing seven different nationalities, while the shipyards of no less than six different countries sent their vessels to compete for prizes in the Bay of La Napoule where the meet was held this past spring. Up to last year this regatta has been held at Monte Carlo; but the exposure of the course to the open sea, and the frequent postponements because of rough water caused it to be moved down the coast to the protecting bay which surrounds the city of Cannes.

The move was a great success, for the bay of La Napoule is land locked, protected as it is on the south by the islands of St. Marguerite and St. Honore, and on the west by the sheltering arm of Cap Roux. Nor did the rain, which so

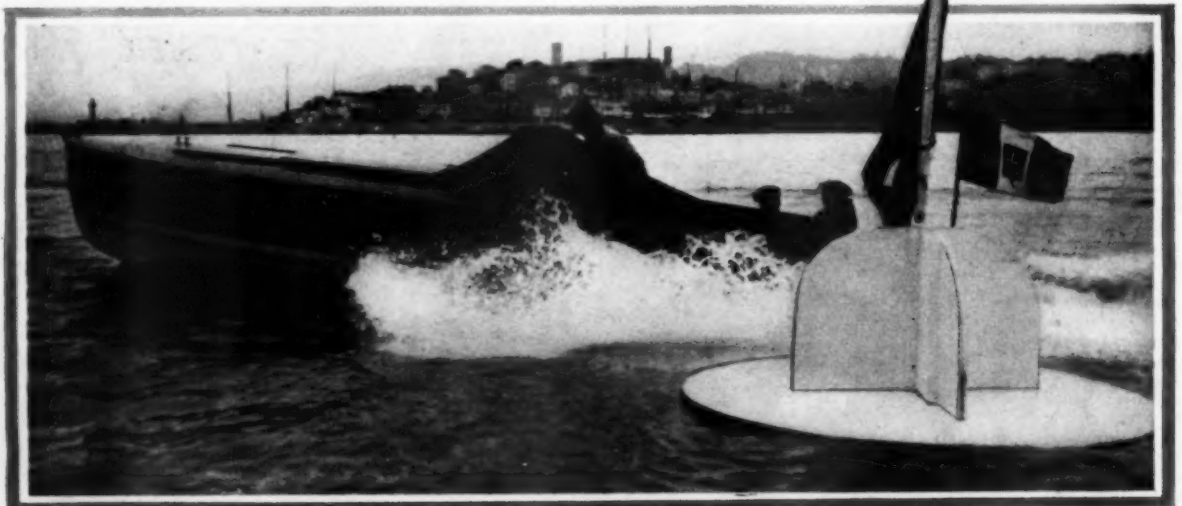
The International Meeting at Cannes on The Bay of Naples Attracted Entrants From Many Countries of Europe—Winners Coming to The United States This Summer

By JOHN R. TUNIS

effectually spoiled all the other sporting events during the spring months on the Riviera, hamper the program, for nearly every day of the meeting was perfect for the high powered speed boats which dotted the harbor. Upsets, rough seas, wind, all the bugbears of the sea motor enthusiast were lacking during the ten days of the contests.

The course, which was in full view of the Croisette, the promenade along the sea at Cannes, was an oblong shaped affair; a thousand meters wide by fifteen hundred meters long. (Roughly, three thousand by four thousand five hundred feet.) Boats entered in four different classes: the international one and a half litre class (91½ cubic inches), a class for racing cruisers of from eight to twelve meters with a maximum cylinder capacity of twelve litres (732 cubic inches), a special cruiser class with a maximum cylinder capacity of three litres (183 cubic inches),

(Cont. on page 104)



Baglietto XXII rounding one of the turning marks in the Bay of Naples with the city of Cannes in the background

Blue Print Bound in May 1924

COOT, a 27-ft. Skipjack Schooner

An Excellent Little Auxiliary Schooner Designed for Cruising and Day Sailing
Arranged With A Jib Headed Mainsail and Clipper Bow

Designed Exclusively for MoToR BoAtInG

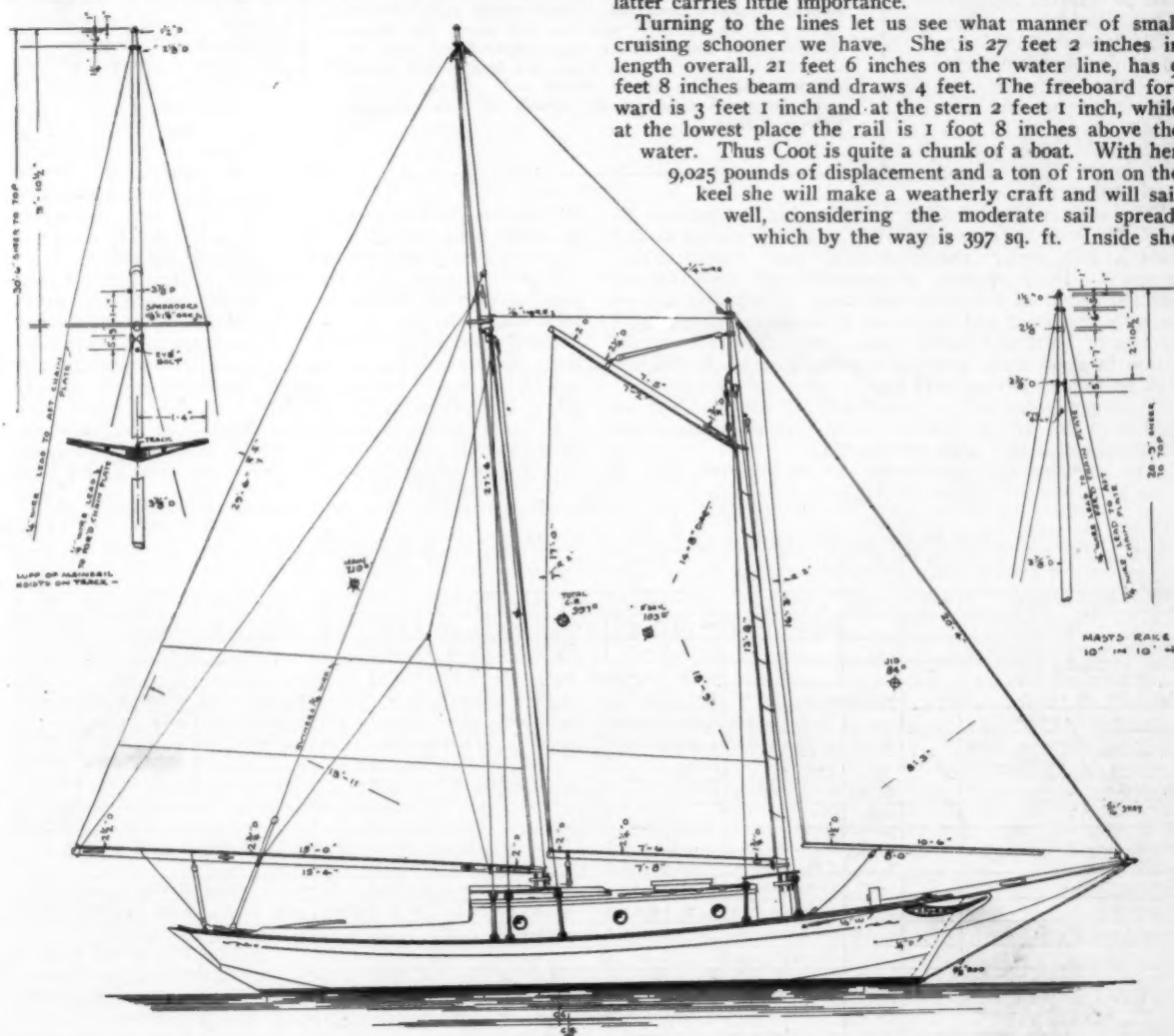
By WILLIAM ATKIN

FOR a long, long time I have intended to design a small jib headed main sail schooner, with a clipper bow, sharp rake to her masts and as many of the earmarks of a large vessel as seemed practicable in a craft under 30 feet in overall length. I have made a number of designs of small schooners, but these others were in collaboration with owners who knew just what they wanted, and consequently were not in every line to my taste. One of these is Fair Wind, which is now being built down on the Chesapeake for Sheldon Potter. Fair Wind is like this new design in some ways, but is a centerboard boat a foot or so shorter, a foot less draft and carries quite a different rig. Then there is Widow, the 28 foot by 7 foot 6 inch schooner which I designed last winter for Robert H. Moore, one of my neighbors at Huntington, and which is now building. Widow, though, has the newer fisherman's bow

and is a faster type than Coot, my latest baby schooner. And then, too, this child is of the V bottom or skipjack type while the other is of round bilge model.

There is much to be said for a diminutive schooner both from the angle of cruising and for day sailing. It is far more interesting to sail a boat which has several sails than one with a single sail, and it takes more skill to handle the two stickler as well. Since the sails and spars are all small the work of setting, reefing and furling sails is minimized. Then, too, as different conditions of weather are met with there is unusual interest in setting just the proper combination of canvas with which to get the most out of the boat and remain comfortable while driving along in rough water, or ghosting along in light airs. To be sure there is more gear to look after, and all that; but since most of us have boats for the fun and work we get out of them the latter carries little importance.

Turning to the lines let us see what manner of small cruising schooner we have. She is 27 feet 2 inches in length overall, 21 feet 6 inches on the water line, has 9 feet 8 inches beam and draws 4 feet. The freeboard forward is 3 feet 1 inch and at the stern 2 feet 1 inch, while at the lowest place the rail is 1 foot 8 inches above the water. Thus Coot is quite a chunk of a boat. With her 9,025 pounds of displacement and a ton of iron on the keel she will make a weatherly craft and will sail well, considering the moderate sail spread, which by the way is 397 sq. ft. Inside she



Outboard profile, sail plan, spar details and rigging arrangement of the 27-foot skipjack schooner Coot, designed by William Atkin

will need about 1,500 pounds of ballast stowed between stations 5 and 9. There will be room for this beneath the cabin flooring.

The clipper bow is used because it looks well and also because it is particularly appropriate to use on a craft of the skip jack model. Somehow it seems to fit the straight sides and flare of this type boat. It is a little more difficult to build on account of the necessity for decoration; but after all if one can build the boat the dressing up part should not be troublesome.

It will be noticed that the after sections beginning at Sta. 8 have a reverse curve near the deadwood. This is to provide a little more room under the motor and contributes considerably to the strength of the deadwood and after part of the underbody, which incidentally makes a leaky garboard seam unlikely. There is always a severe wringing or twisting strain on a sailing craft when a large portion of the ballast is carried outside. The moulded sections aft strengthen this a great deal, because there is better fastening for the frames on the side of the deadwood as well as a solid backing for the lower edge of the garboard strakes.

The construction of Coot is heavy but not excessively so. There is little use in piling a lot of useless timber into a hull under the impression that weight makes strength. Parts properly proportioned and well fastened are the secret of a huskily built boat. Fastenings are especially important and if you see a workman driving nails, screws or bolts and taking pains that they are driven home in good style, you can bet the boat he is building will be a good job and will have a long and useful life.

I am not going to go into details of putting Coot together in this article, rather I shall give suggestions and ideas in connection with the building.

The iron keel will have to be cast by professionals. A

pattern must be made either by the foundry folks or the boat builder. Since the casting tapers off aft it will require a box pattern which can be made of $\frac{3}{4}$ inch pine or cedar. Pads must be placed for the foundry man so that he can set cores for the keel bolts, which by the way are to be $\frac{3}{4}$ inches in diameter. The holes should be elliptical and about $\frac{1}{8}$ inch larger in diameter than the bolts, this will permit a little leeway in case of unexpected shrinkage in the iron. Before the iron is bolted to the wooden keel there should be a piece of felt laid on the keel, well soaked with red lead. This is not always done but is a

refinement that is quite worth while as it forms a perfectly water tight seam between the iron and the wood.

The deadwood will be fastened together with drift bolts. These consist of lengths of galvanized rod and are driven in like long spikes. Holes are of course bored for these but are somewhat smaller than the rod. It is best to bore at various angles for by doing this the several parts of the deadwood cannot be pulled apart without tearing the wood to splinters. I should fasten the stem and its parts to the keel with $\frac{5}{8}$ inch bolts having washers and nuts. Here

the wood is not heavy enough to take drift bolts, nor would the latter hold well. Bolts should also be used in fastening the horn timber and the various parts of the stern.

It will be noted that the propeller shaft is very nearly parallel with the water line, a feature which will make ideal conditions for the operation of the motor. Any motor will give better results if it operates in a level position; the carburetion is better, especially in multi-cylinder outfits, the water cooling system functions better, and the oiling is uniform to all cylinders.

If the propeller is set in a small port cut half into the deadwood and half into the rudder excellent results will be obtained while the boat is under power, and very little

LET MR. ATKINS DESIGN A BOAT FOR YOU

IN this issue we publish two more complete How to Build designs by Mr. Atkins. One of these is a 27-foot jib-headed main auxiliary schooner, and the other a 7-foot dinghy which is large enough to be serviceable under almost all conditions usually met while cruising. We feel certain that both of these designs will appeal to the reader of MoToR Boating. The schooner in particular is something very much out of the ordinary and a type of boat which is becoming more popular every season.

Both of the boats shown this month have been designed at the suggestion of readers. No doubt you have a particular type and size of boat you are hoping to have designed or built some day. If you have, tell us about it and we will have Mr. Atkins design it for you. Many suggestions have been received from our readers since we began this series of designs. The plans which will appear in the near future are to be the result of these suggestions.—Editor.

← DIMENSIONS TO OUT SIDE OF PLANKING →
IN FEET AND INCHES.

TABLE OF OFFSETS NO 148 → 27'-2" x 21'-6" x 5'-8" x 4'-0" AUX'L SKIPJACK -																
STATION	A	O	1	2	3	4	5	6	7	8	9	10	11	12	C	S
← HEIGHTS →																
LWL TO SHEER	3-1	2-8¾	2-5½	2-3	2-1	1-11	1-9½	1-8¼	1-7½	1-7¼	1-7⅝	1-8	1-9	1-10½	1-11½	1-3
" " GILT COVER			2-0	1-9½	1-7½	1-5½	1-4¼	1-3¼	1-2½	1-2⅝	1-2⅝	1-3½	1-5	1-6½		
SHEER TO SIDE OF HOUSE					1-2½	1-3	1-3½	1-3¾	1-4	1-4						
SIDE OF HOUSE TO TOP OF HOUSE					0-2	0-2¼	0-3	0-3¼	0-3½	0-3½						
BASE TO D 1		6-4½	4-8	3-8	3-1	2-7½	2-4	2-2½	2-2½	2-4	2-7¼	3-0½	3-7¼	4-3½	4-9⅝	
" " RABBIT			3-2	2-7½	2-5½	2-0½	1-10	1-8¾	1-8	1-7½	1-7¼	1-8	1-9	4-1	4-8½	
" " BOTTOM KEEL		4-0	2-7⅝	2-0½	1-6½	1-1½	0-9		STRAIGHT	LINE TO				0-0		
LWL TO PROPELLER CHART										1'-0	STRAIGHT			1-4		
BASE TO CHINE		5-0½	4-8	4-4½	4-1½	3-11	3-9	3-7¾	3-7¼	3-8	3-9	3-11½	4-3	4-7½	4-11	
← HALF BREADTHS →																
DECK		1-5	2-5½	3-3½	3-11	4-4½	4-8	4-10	4-10	4-9½	4-8	4-5½	4-2	3-9½	3-6	3-1½
CHINE		0-4	1-1¼	1-10½	2-7	3-2½	3-8	4-0	4-2	4-2	4-0¼	3-8	3-1¾	2-5	1-10¼	1-9
SIDE OF KEEL		0-0½	0-1	0-2	0-2¾	STRAIGHT	LINE TO					0-2¾	0-2	0-0¾		
← DIAGONALS →																
D 1										1-8	1-7¼	1-5¼	1-1	0-7½	0-1	
D 2										2-1	2-0½	1-9½	1-5	0-10¼	0-1	

Complete table of offsets containing all figures for laying out the 27-foot skipjack schooner Coot

drag will hinder the schooner while under sail. Another advantage in this arrangement is that the rudder can be shoved all the way over and the propeller thus readily removed. Since the rudder post is made of $1\frac{1}{2}$ inch brass pipe and the stern post is to finish 2 inches wide there will be but little interference in the flow of water to and from the propeller.

At first hand the rudder looks weak where it joins the post. However, it is not. There is 4 inches of length where the post laps the blade. The post can be made from a piece of $1\frac{1}{2}$ inch brass pipe having $1\frac{1}{2}$ by $\frac{3}{4}$ inch straps welded on each side, the blade of course fits between these. In addition a $\frac{1}{2}$ inch diameter brass rod should be let through the post, running diagonally across the blade as shown by the dotted line at the top of the rudder. The brass pipe must be filled inside with a piece of locust wood driven in tightly; this should run the full length of the rudder post. The blade of the rudder should be made of 2 inch white oak having its after edge faired down to about $\frac{3}{4}$ inch.

Another thing of interest is the lignumvitae stern bearing. This is a tube of lignumvitae wood turned to the diameter of the shaft and about $\frac{3}{8}$ inch thick in the wall. It is fitted snugly in a hole in the stern post and fastened with two oak dowels let into the stern post in such a man-

ner as to cut through the side of the wooden tube. Thus the bearing cannot turn nor can it move forward or aft. Lignumvitae makes the finest kind of bearing under water, and furthermore is perfectly lubricated by water. A regulation stuffing box goes inside and in addition to this I should fill the shaft alley with melted paraffine. The latter is the finest thing in the world to use if it is desired to make the shaft alley and deadwood perfectly water tight.

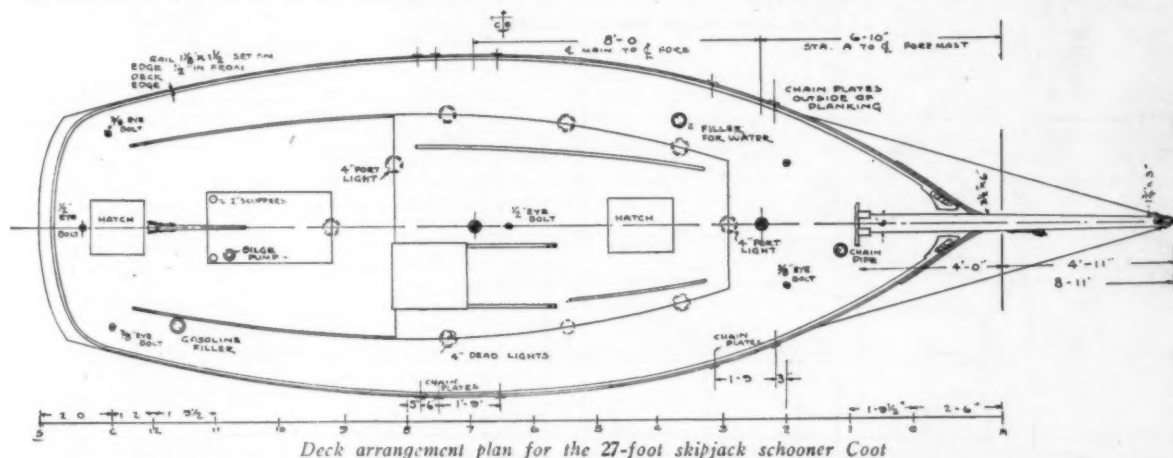
In connecting up the exhaust, for water connections and for the various connections on the toilet it is better to use rubber or steam hose than lead or brass pipe. Hose is inexpensive and can be connected with clamps which eliminate soldering and threading. Hose is especially good for the inlet and outlet of the water closet. It will outlast lead by several years and is easily removed and renewed.

The frames should be made up complete with temporary cross pieces across the sheer. The sides and bottom members are to be made of $1\frac{1}{2}$ by $2\frac{1}{2}$ inch white oak. At the chine corner the frames are joined with a piece of $1\frac{1}{4}$ inch white oak. The fastenings here must be $\frac{3}{8}$ inch diameter galvanized iron bolts, four to each corner piece. The floor timbers are to be made of $1\frac{3}{4}$ inch yellow pine or white oak and fastened in the same manner as the chine corners, and with the same size bolts. The frames are to be set up on the keel and deadwood on 1 foot $9\frac{1}{2}$ inch centers. The odd dimension is accounted for because I always divide the water line length into twelve equal parts and as the water line is $21\frac{1}{2}$ feet long the station spacing (which happens to be the frame spacing in this boat) as well must be $21\frac{1}{2}$ inches or 1 foot $9\frac{1}{2}$ inches. Don't change

the spacing. It is just as easy to measure off inches and halves as inches even.

The frames set down on an apron piece just as they would in the building of a V bottom motor boat, and are held in place by the same bolts that hold the iron keel. The two end bolts come on the center line, but the rest are staggered so as to better distribute the load on the keel and floor timbers.

I have used battened seams on account of the wide spacing of the frames. The battens with the clamps should all be let in and fastened before any of the planking is laid. There will be three planks laid on the top sides, which means two battens; and six planks on the bottom each side, which means 5 battens. The battens need not be in single lengths, but if short lengths are used scatter the butts pretty well. White oak should be used for battens and if they are made $\frac{3}{4}$ by $2\frac{1}{2}$ inches they will be heavy enough. The planks on the bottom will all be of the same width for the full length of the boat. The seams will follow the center line and not sweep in aft and forward. In other words the planks on the bottom are not tapered. There is no use in shaping planks that go on a V-bottom boat. The planking on the top side will be shaped and so here the battens will divide each side frame into three equal parts. Screws should be used for



Deck arrangement plan for the 27-foot skipjack schooner Coot

fastenings, both into the frames and the battens. The heads of these should be countersunk and covered with wooden plugs. This forms a fine surface to plane off and finishes better than putty filled countersunk heads.

The deck is to be laid with $\frac{3}{4}$ by 3 inch fir with tongue and groove edge, and then covered with 10 oz. canvas duck. I should lay the canvas in Jeffery's water proof marine glue as then it will lay snug to the deck and finish smoother after having been painted. I believe the drawings show pretty well the manner in which the deck house is fitted and the materials from which it is to be made. Excepting for a bit of trim here and there do not use mahogany. It is expensive and while excellent for the purpose of a high finish is not strong, nor will it stand up like white oak or yellow pine. I should use cypress for the house sides $1\frac{1}{2}$ inches thick and paint it both inside and out. A house painted white on a small boat looks better than a varnished house and is lots more shippy as well. In the sides of the house it would be best to use deadlights with an open port light in either end. The latter with the companionway will give enough air.

The sail plan shows everything one needs to know about the rig with the exception of the weight of the duck. The sails should be made of about 8 oz. duck with cross cut cloths and the cloth should not be made too narrow, 22 to 28 inches would be about right. I would, however, consult the sail maker about many matters in connection with the rig.

A motor developing 5 to 8 h.p. will be ample for a speed of 6 miles an hour and I should not advise installing greater
(Continued on page 68)

Rinky-Dink, Seven Feet of Boat

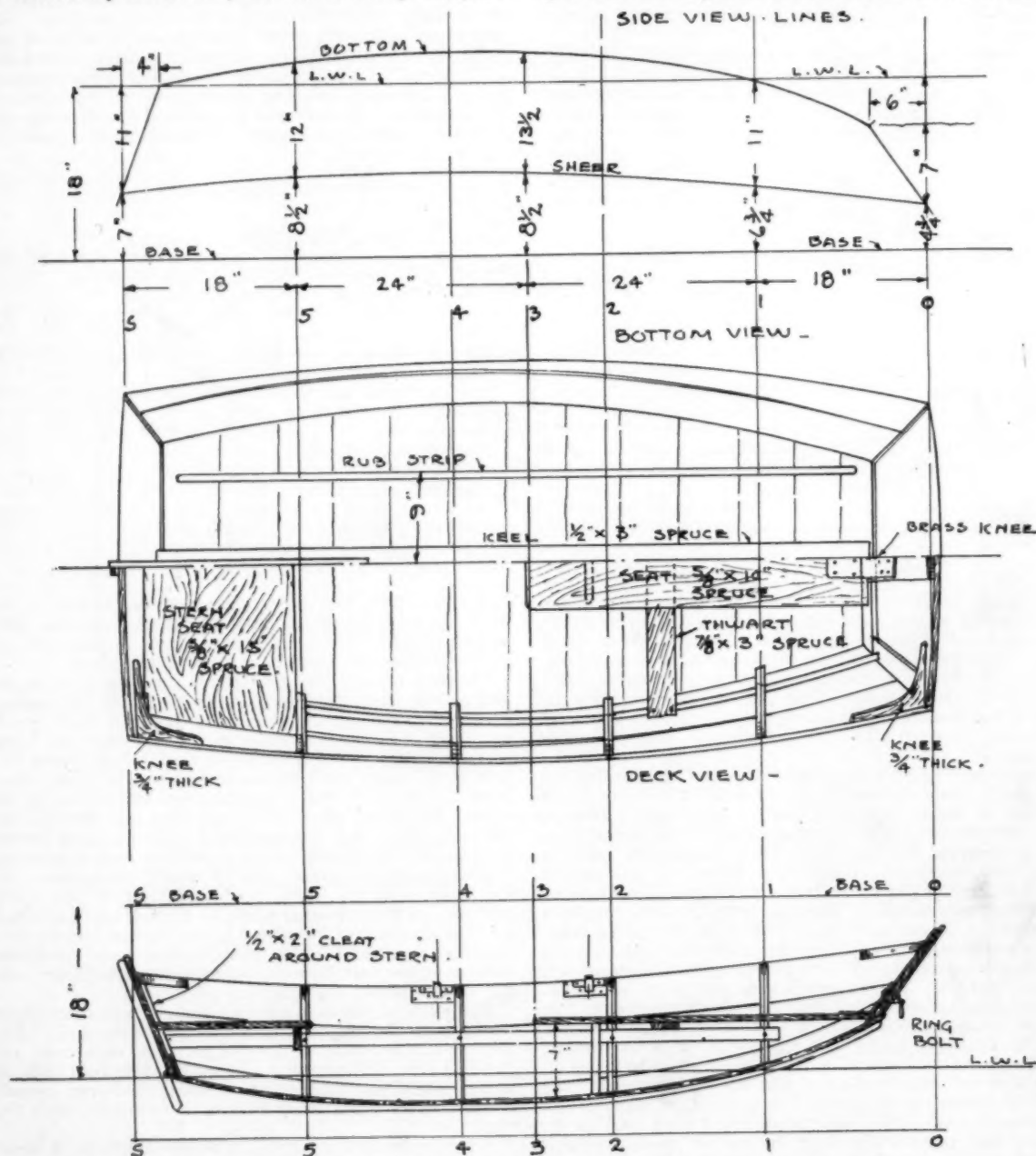
Useful Little Pram Bowed Tender to Carry Three, Designed for The Man Who Uses A Small Cruiser

Designed Exclusively for MoToR BoatinG

By WILLIAM ATKIN

SOME years ago I had built a dink something like the 7 footer shown in these plans. She was satisfactory in the main, but I made up my mind that in another design I should make several changes. In Rinky Dink the bow is about 5 inches narrower than in the first boat, there is considerably more sheer, the bow is cut up more, the

arrangement of the fore and after seat is different, and the inwales have been left off. The latter simplifies the construction and saves a little weight. Another thing which I feel is an improvement is the use of spruce rather than white oak for several parts of the job. Spruce is quite all right to use in a tiny craft of this sort, and is ever so much



Lines, arrangement plan, bottom view and inboard construction profile of the seven-foot tender Rinky Dink

lighter than oak. The saving of weight by using spruce will be as much as 15 pounds and this is a lot when one considers that the whole boat will not total 80 pounds.

I have now in my work-shop the lumber for the building of Rinky Dink and the bill for this was a few cents under \$12.00. With brass row locks, 5-foot spruce oars, painter, ring bolt for the bow, screws, nails and varnish, the materials will cost less than \$28.00. I believe a professional builder would finish one of these dinks for between \$50.00 and \$60.00, depending upon the degree of finish and the care with which she was painted and varnished. However, costs vary so in different localities that it is difficult for one to quote prices with exactness.

In examining the design several interesting features will be noticed, not least among these is the fore and aft rowing seat. This seating arrangement permits the oarsman to shift his weight depending upon the number being carried in the boat. With one aboard, the after row locks would be used and the trim preserved; with two aboard, the forward row locks are used and the rower's weight, being shifted forward, counterbalances that of the passenger aft; with three in the dink, and she will carry three, the oarsman rows from the after locks and again the correct trim is maintained. The narrow thwart under the forward seat prevents the sides from panting, especially at such times as the boat is tipped up ashore to free her of water. Without this thwart the sides are insufficiently stiff and great care must be taken not to start a leak along the bottom where the cross planking joins. Notice also the ring bolt at the bow; from this Rinky Dink will tow like a charm, with her head up and without yawing and pitching. Do not change the location of the towing ring.

By all means if you decide to build one of these little dinks lay the lines down on a piece of building paper full size. At first thought it may seem unnecessary to go to this trouble, but if I know anything about boats, laying down in this manner is time well spent. And it also checks small errors in dimensions and makes it possible to build a boat exactly as the plans intend. Notice that the lines and dimensions indicate the outside of the planking and thus its thickness, in this case 7/16 inches, must be taken off the forms as they are made, as shown in Sta. 3.

The forms may be made of 7/8-by-4-inch spruce with the exception of the piece which stretches across the sheer. This should be about 2 inches wide. As the forms are made mark the

position of the sheer, the water line and the center line, for without these there is no way in which to make sure that the forms are set up in their right positions. There are three forms, one in the middle of the boat at Sta. 3; the others fore and abaft this, a distance of 24 inches. The side legs of the forms should be cut to sufficient length to

reach to the base line as shown in Sta. 3. Thus, when the forms are set up on a level and straight floor they will assume the right position vertically. Each form must be plumb and also square across the boat. The dink will of course be built bottom side up. The temporary bracing which holds the forms must be secure for otherwise things will be shifting and when the boat is finished she will be lop sided.

The stern board and the stem are to be made of 1/2-inch spruce. Since the widest of these is but little over 14 inches, each can be made in a single width. It will be necessary to run 1/2-by-2-inch spruce cleats around the sides and bottom of the two ends so as to give better surface for fastening the planking.

Be sure to lay these cleats in Jeffery's liquid marine glue. Notice that because of the bevel on the bottom and the sides that the stem and stern must be made somewhat larger than the dimensions show and allow for this. The amount of extra wood needed can be accurately judged by sketching in these parts on the full size drawing of the lines which has been laid down. The two ends can now be set up in their correct positions, and well braced from the floor with short lengths of roofing lath or some other stuff of about this size.

The notches for the chine pieces should now be made. Those in the forms are cut out the full thickness of the wood, but those in the bow and stern boards must be cut into the 1/2-inch cleat only, otherwise the end wood will show from the face of the bow and stern. The chines are made of 7/8-by-1-inch spruce and must be free from knots. Screws will be required to fasten the chines to the forms and into the end boards. Those in the forms are temporary as they will have to be removed before the side planking is laid.

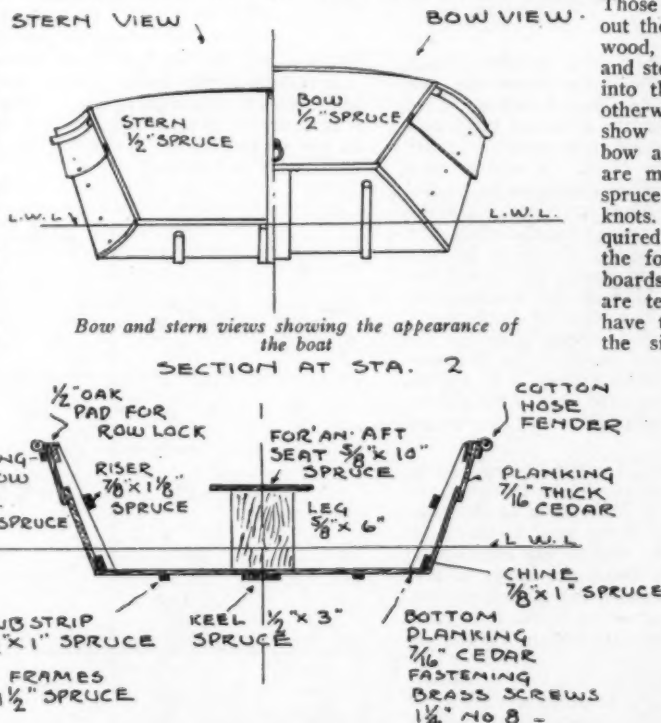
Now fair off the sides of the chines both on the sides and bottom and prepare to lay the first plank.

The planking should be 7/16-inch white cedar. Other woods than this may be used if cedar is not obtainable. Fir, pine, cypress, or mahogany can be used and with the exception of greater weight will be satisfactory. The shape of the first plank is found as follows:

HERE IS A DINGHY YOU'VE BEEN WAITING FOR

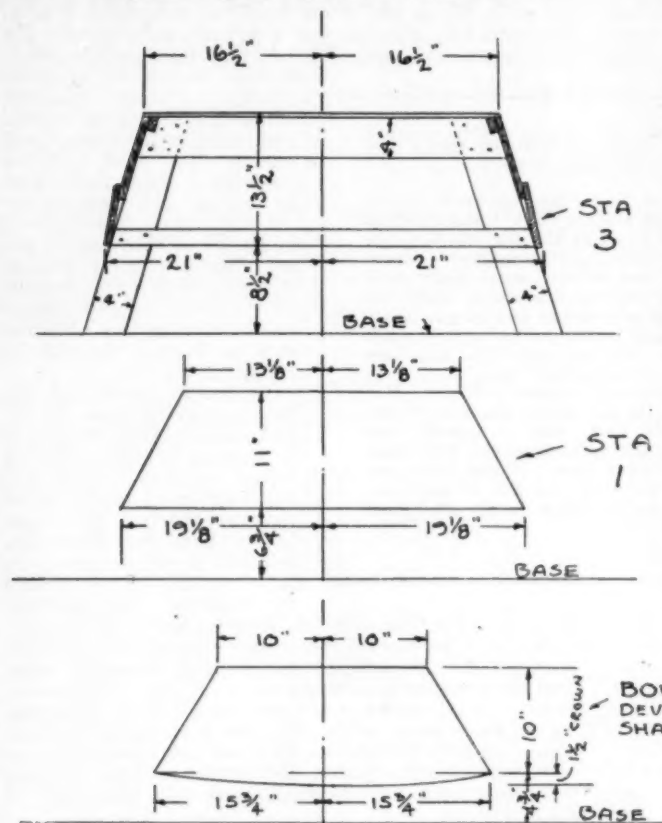
THIS seems to be a Dinghy year. Every one wants to build a dink. Many tell us that they would buy one but for the fact that one can not be found on the market which is suitable. They are all too large, heavy, and cumbersome for the small cruising boat. So we asked Mr. Atkin to design one for you which would be light and small, yet be as serviceable as a 14-footer. He has done this and kept within one half the length—7 feet.

Next month's plans will interest you too. One of these will be the hit of the season. A 30-foot shoal draft boat, that is speedy and economical and will run in water not much deeper than a heavy dew. If you have any suggestions for the type and size of boat you would like to have Mr. Atkin design, send them to us.—Editor.



Midship construction section of Rinky Dink giving sizes of all material

MAKE FORMS OF $\frac{7}{8}$ " X 4" SPRUCE
BUILD BOAT BOTTOM SIDE UP -



Molds for stations 1 and 3 and the developed shape of the bow

Select a plank which has ample width to reach from the bottom to the place where the side planks lap, which will be about 9 inches. Then clamp or fasten this on the side and bend over the forms in approximately the position it will have when permanently fitted. It will be seen that both the top and bottom edges can be scribed on it very accurately. After its removal saw out and make two duplicate planks for the other side. The lap where the planks join should be $\frac{3}{4}$ inch. Since it is difficult to saw exactly to a pencil line I should allow about $\frac{3}{4}$ inch for finishing the edges with a plane. The ends of both planks are rabbeted for a length of about 18 inches, the rabbet tapers away from one-half the thickness of the plank at its end to nothing. It will be seen that the rabbet allows the ends of the planks, after they are on, to finish fair where they attach to the bow and stern.

After the rabbets are all cut the plank can be fastened to stay. Screws should be used for fastenings, using four to each plank at the ends. The fastenings into the forms must be taken out later and so it would be well to use round head screws having washers under the heads to prevent marring the surface of the planking. The fitting of the second or sheer plank is a repetition of the first and hardly requires further instruction.

The bottom is laid cross ways of $\frac{7}{16}$ -inch cedar in planks about 4 to 5 inches wide, but not exceeding 5 inches. Before laying the planks the bottom of the chines must be faired off using a straight edge to make sure that, as the planks are laid, they fit nicely against the chines. Screws

will be used for fastenings, and should be set three to each plank end. Paint the face of the chine with liquid marine glue as each plank is fastened. The bottom will never leak if treated in this way.

When the bottom is on and the ends of the planks sawn off the entire exterior should be thoroughly sand papered and then swept off. Three strands of cotton wicking must be rolled into the bottom seams. Do not drive this in too tight for if you do the bottom will swell and bulge as sure as fate. After paying the newly caulked seams fill with white lead and putty mixture. Now the skeg, keel and rub strips are to be fitted. First, however, paint under these with one coat of white lead paint. The skeg is $\frac{3}{8}$ -inch spruce and fits against the bottom planking. This permits of the keel being slotted for the length of the skeg and the skeg fits into the slot, the advantages of which are apparent. I should fasten the keel and skeg with screws from the inside. We may now turn the dink right side up.

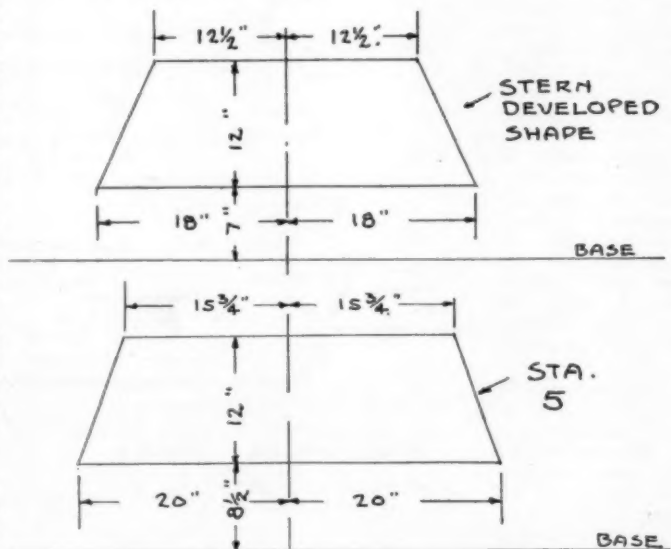
The rest of the work will not be difficult to do, but it will take time, and especially if a fine finish is desired. Before the forms are taken out fit the small knees fore and aft as shown, and add a temporary saw buck across the sides so as to make sure of preserving the flare of the sides.

The four frames shown on stations 1, 2, 4 and 5 are to be made from spruce $\frac{5}{8}$ by $1\frac{1}{2}$ inch. These will be fastened with screws or long rivets about 6 to each frame. It is better to over fasten than to skimp here. The seat riser is $\frac{3}{8}$ - by $1\frac{1}{8}$ -inch spruce, and should be thoroughly fastened with long copper rivets into each frame. The fitting of seats, row lock pads, moulding, etc., is simple work and hardly needs describing. The Rinky Dink which I am building will be painted outside and varnished inside. The moulding will be set $\frac{1}{2}$ inch below the edge of the sheer so as to better hold a piece of cotton rope or hose which will form an excellent fender. This should run across both the bow and stern to be most effective.

After having followed all of the instructions carefully and making a workmanlike

job you will have a boat to be proud of.

A little boat such as this makes one of the most useful and handy accessories to any cruising craft. There are so many occasions when it is desirable to have a small boat to get back and forth, and also to use when cleaning down the sides and other similar tasks for which this one is well suited.



Development of the stern and the mold for station 5

SMALL MOTOR BOATS

Their Care, Construction and Equipment

A Monthly Prize Contest Conducted by Motor Boatmen

Questions Submitted for the September Prize Contest

1. Describe and illustrate a suitable and simple oil filter for use on marine gasoline engines.

2. Give plans and specifications for a small yacht club house of inexpensive design.

Correcting Faults In Cranky Boats

Inexpensive Methods Suggested Which Will Remedy Faulty Design and Make A Boat More Habitable

Answers to the Following Question Published in the May Issue.

"How can a cranky or unstable hull be corrected of these faults, at a nominal cost for material and labor."

Correcting Faults of a Cranky Boat

(The Prize-Winning Answer)

THEORETICALLY, the excessive rolling of a boat and how it can be corrected is on the same principle as adjusting the pendulum of a clock, i.e., by lengthening it, the clock will run slow, and by shortening it, the clock will run fast. This is illustrated in the sketch by the spot above the waterline marked M. C., an imaginary point from which the rolling of a boat pivots, and known as the Metacenter. The spot marked C. G. is the Center of Gravity of the boat, and the spot C. B. is the Center of Buoyancy, which is really the Center of Gravity of the volume of water the boat displaces. In designing a boat, the Center of Buoyancy and the Center of Gravity are figured by the Naval Architect, after which the Metacenter is determined by laying out a section of the boat in a listed or inclined position, spotting the Center of Buoyancy and the Center of Gravity on it, and noting where they shift to when boat is listed, and drawing a vertical line up through these two points until it intersects the Centerline of the boat. The distance between the Center of Gravity and the Metacenter is called the Metacentric Height or G. M., and its length is of vital importance to the designer, as it has everything to do with the stability of the boat. If it is long the boat will be slow and easy rolling, if short, quick rolling and cranky. This same theory applies to the fore and aft motions of a boat also.

To correct the faults of a cranky and quick rolling boat, the length of this imaginary line (G. M.) must be increased, and this can be done in most cases by relocating some of

the weights, such as gas and water tanks, etc., and with proper ballasting. It is not so much the amount of ballast

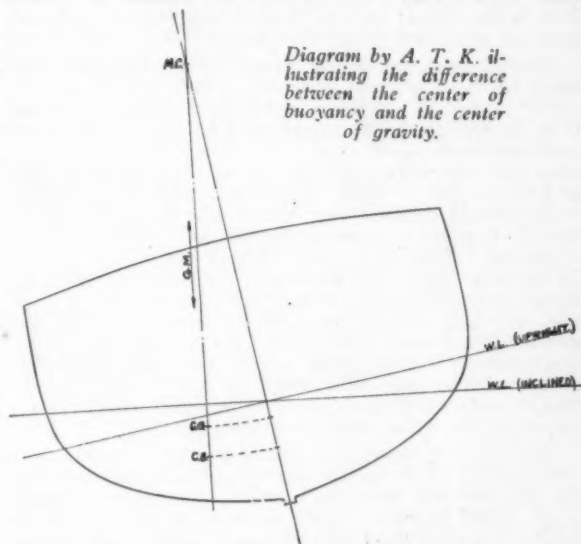


Diagram by A. T. K. illustrating the difference between the center of buoyancy and the center of gravity.

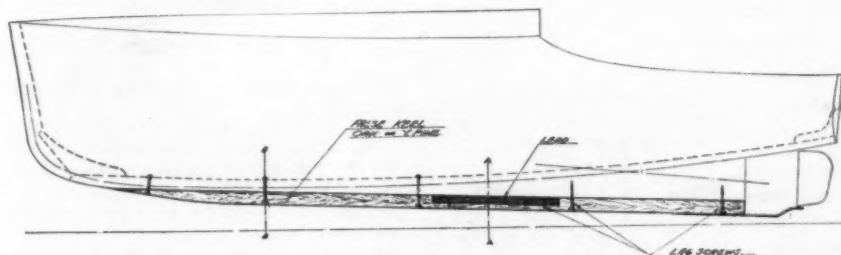
placed in a boat that counts so much as the way same is distributed.

The proper location of ballast and weights depends upon the shape of the boat. A cabin boat with a narrow section will roll very quickly, due to the narrow beam and tumbled bilge, but can be remedied somewhat if most of the weights or ballast are stowed low along centerline, while the beamy boat with a more flat bottom, will require weights and ballast placed well outboard and somewhat higher.

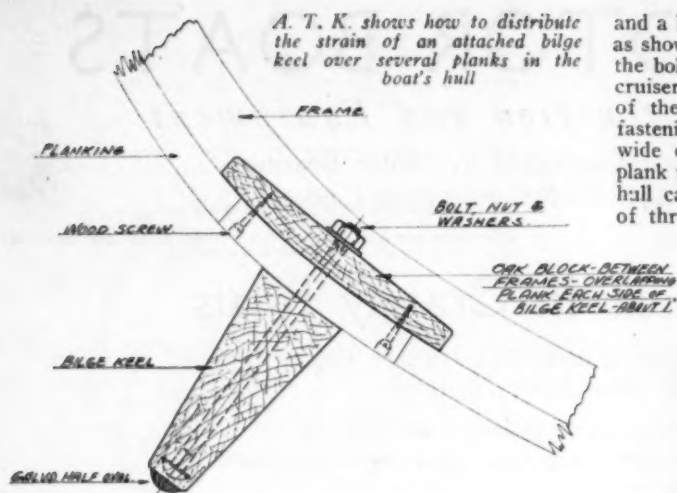
This will make a very steady boat, due to the full section and bilge bearing.

To correct excessive pitching of a boat, the weights and ballast should be spread out fore and aft, which will cause her to rise and fall more easily in head-on and following seas.

Most any kind of cast iron scrap can be used as ballast, such as old boiler grate bars or the like. They stow in the bilges much



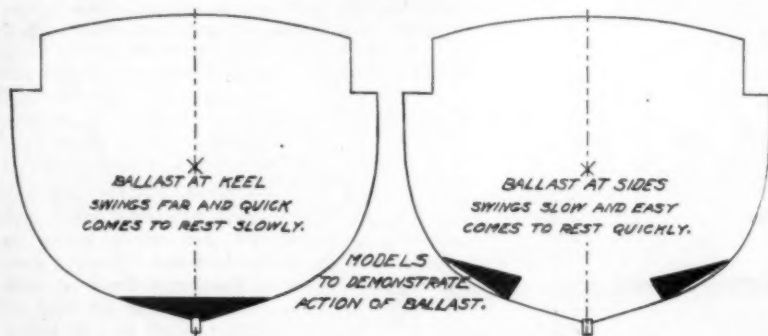
A method of adding a false keel by A. T. K. which also shows how to include a lead casting to give greater stability.



better than chunky pieces, and are much easier to handle. Iron ballast should be wire brushed and painted with two coats of read lead before stowing.

Another good way to help correct faults of a cranky and quick rolling boat is by fastening a false keel of oak or yellow pine to the bottom of the keel, tapering or scarfing it at forward end. This acts as a fin and should be of same thickness as the keel. It is not practical to have false keel any more than one and one half times as deep as keel of boat is wide. Fastening should be of bronze or galvanized bolts and lag screws; the latter will be required aft as bolts cannot go through keel in way of shaft or engine. If desired, a piece of lead can be cast in clay, by the amateur, to any dimension and fitted as shown by sketch section A-A, care being taken to locate it in a place that will best suit the trim of the boat, which for the average boat is aft of amidships. The lead will help bring down the Center of Gravity which raises the Metacenter, thereby making boat more steady in a sea. This change was recently made to a 32 x 9 foot raised deck cruiser owned by the writer with remarkable success.

Bilge keels, if placed on a boat in the proper manner will help prevent quick rolling, although they are not practical for the pleasure boat much under forty feet in length. They should be fitted slightly under or at the turn of the bilge (depending upon the shape of the Boat) and pitched on an angle of about 45° from the keel, and run parallel to the waterline of the boat when underway, so as to cause least possible resistance. The cruiser that carries a full beam well forward and aft, can be fitted with bilge keels for about two-thirds of her length, but for the average boat one-half length amidships is plenty. For the forty to fifty footer, they should be 2 3/4 to 3 inches thick, 6 to 7 inches wide, beveled down to about 1 1/4 inch at outer edge, fastened to the hull with galvanized or bronze bolts,



W. B. M. illustrates the efficiency of ballast when placed furthest away from the keel

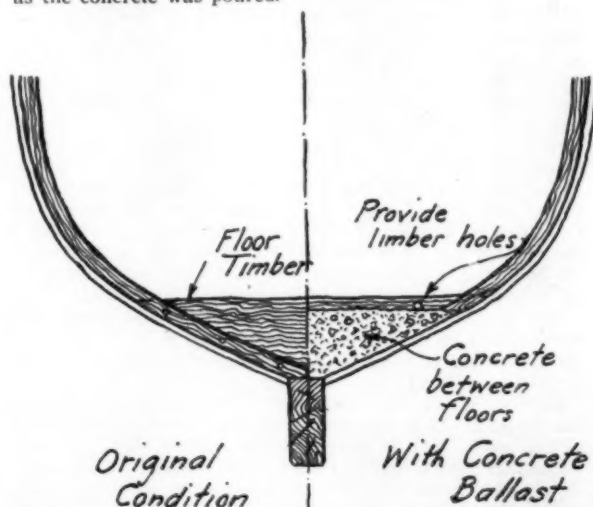
and a half oval galvanized face bar fitted along outer edge, as shown. For a boat with very heavy frame construction, the bolts can go through frames, but for the average built cruiser, bolt holes drilled in the frames all along the turn of the bilge, may weaken the hull, and a much better fastening is made by fitting an oak block between frames, wide enough so it overlaps one plank each side of the plank that bolts go through. In this way the strain on the hull caused by a heavy rolling sea is spread over an area of three planks all the way along, instead of being concentrated at one place when fastened through the frames.

E. T. K. Wilmington, Del.

Concrete to Cure Cranky Hull

SOME years ago we owned a small raised deck cruiser that was unstable and cranky, due perhaps partly to a heavy duty engine, set fairly high, weighing 1400 pounds, that there was no pleasure in using the boat in rough water.

This trouble was cured easily and cheaply by pouring concrete, containing but a small amount of gravel, between the floor timbers of the hull, almost to the tops of the timbers. The work was done on a quiet day so that the concrete could set while the boat was floating without rocking or pitching and the waterline could be observed as the concrete was poured.



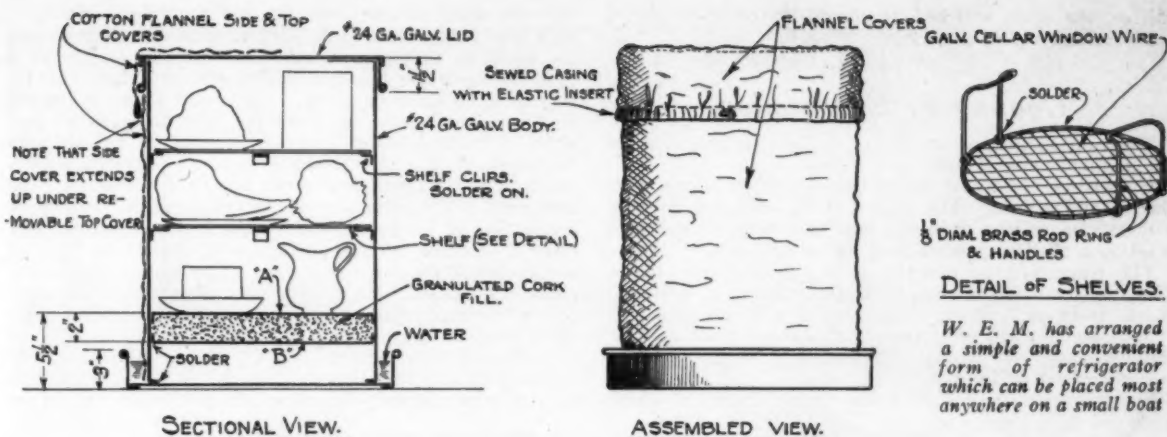
H. H. P. shows the original and improved conditions in a boat in which concrete ballast has been poured between the floor timbers.

Many boat owners do not favor the use of concrete ballast as they say it rots out the inside of the hull. In this case (boat was used on salt water) there appeared to be no trouble from this source; the boat was sold after three years use with the concrete ballast and no rot had been detected; the new owner when seen for the first time four years later, said the hull was in good shape, but with no opportunity for personal observation nothing definite can be stated regarding this.

H. H. P., Los Catos, Calif.

Ballast for a Cranky Boat

A NAVAL architect could take up this whole department on the subject of stability and ballast, but unless he was very careful with the subject you would not be able to correct the quick roll of a cranky hull from the information given. A technical discussion conveys but little to the untechnical (Continued on page 76)



Iceless Icebox for the Boatman

Handy Home Mechanics Can Build Simple Devices to Keep Foods and Perishables from Spoiling Without Requiring Ice

Answers to the Following Question Published in the May Issue.

"Describe and illustrate a simple, inexpensive iceless refrigerator which the boat owner can build with ordinary tools."

A Simple Inexpensive Refrigerator (The Prize-Winning Answer)

THE simplest type of iceless refrigerator operates on the principle of the evaporation of water, absorbing energy in the form of heat units from surrounding objects. This principle is made use of in the design of the refrigerator shown in the sketch, which is more or less self explanatory.

The design shows a cylindrical galvanized iron body, the diameter of which should be made to suit individual tastes, or the size of the space into which the refrigerator will fit in the boat. About 20 inches is a convenient diameter by about 24 inches high. This body is fitted with a galvanized sheet iron lid with a rolled rim and sets into a bottom pan holding the water.

For convenience in making, the bottom pan and the lid can be made in two pieces and soldered together as shown. The slight amount of flanging necessary and the rolled edges with wire insert present the only difficult operations in making this refrigerator, and should be no obstacle to the man handy with tools and soldering iron. However, any tinsmith can do these for you if you do not care to tackle them yourself.

The balance of the construction is straight work with shears and soldering iron. As will be seen in the sketch, the bottom pan is about 4 inches larger in diameter than the main body. The main body is soldered water tight in the center of this pan thereby forming a gutter or trough about 2 inches wide for holding the water. Wire inserted for stiffness in rolled rims should be $\frac{1}{4}$ -inch steel rod.

Before fastening the bottom pan, however, a false bottom marked A, should be soldered in place in the body. This soldering should also be a water-tight job as spilled food must not be allowed to slip through into the cork insulation below. Next fill the space below this false bottom with granulated cork to a depth of 2 inches

and solder the false bottom B in place. The refrigerator should be turned upside down during the last two operations. Space these false bottoms at a distance of $3\frac{1}{2}$ and $5\frac{1}{2}$ inches from the bottom as indicated in the drawing, which allows for a 3-inch high rim on the water trough. For shelves, $\frac{1}{8}$ -inch diameter hard brass wire or rod should be bent up into a circle and covered with galvanized cellar window wire, the loose ends of which are bent down around the brass rod and soldered. Handles of $\frac{1}{8}$ -inch brass rod are formed and soldered to the shelves as shown. These shelves rest on four shelf clips $1\frac{1}{2}$ -inches wide, soldered to the inside of the body.

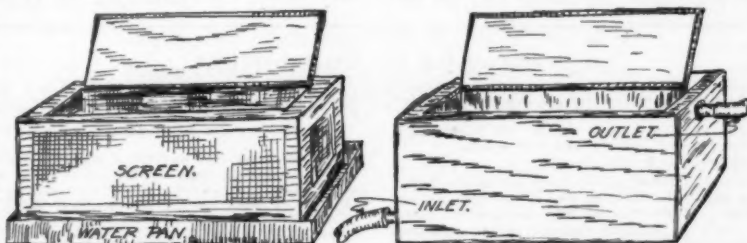
As the lower shelf must clear the clips which hold the upper shelf, it must be made about $1\frac{1}{2}$ inches less in diameter than the upper shelf, and longer clips must be used to hold the lower shelf.

For providing the evaporating surface a loosely fitting tube of heavy grade cotton flannel is slipped over the body of the refrigerator. This sleeve or tube extends down well into the water trough, and stops about $\frac{1}{2}$ -inch below the lower edge of the lid. It should be fastened at the top by wrapping securely with fine copper wire.

The top cover is made of the same material but in two pieces sewed together to form a cap. The sides of this cap should extend down about four or five inches and should be a loose fit on the body of the refrigerator. It is provided with a casing sewed into the bottom into which a piece of $\frac{3}{4}$ -inch elastic is run. This allows easy removal and replacement when it is necessary to open the refrigerator, and holds the cap cover firmly against the body cover allowing capillary action to distribute moisture over the entire top automatically. A draw string may be used in

place of the elastic, but the latter will be found more convenient.

In operation the refrigerator should be shaded from the sun but should be placed where a current of air will readily strike it, as the more rapid the evaporation from its surface, the more



Two methods of cooling foods suggested by W. B. M., one of which uses evaporation, while the other cools by circulating seawater

efficient the outfit will be. It should therefore be placed outdoors and not in the cabin.

W. E. M., Germantown, Pa.

Cooling by Evaporation

The construction of an iceless ice box is indicated on the accompanying sketch.

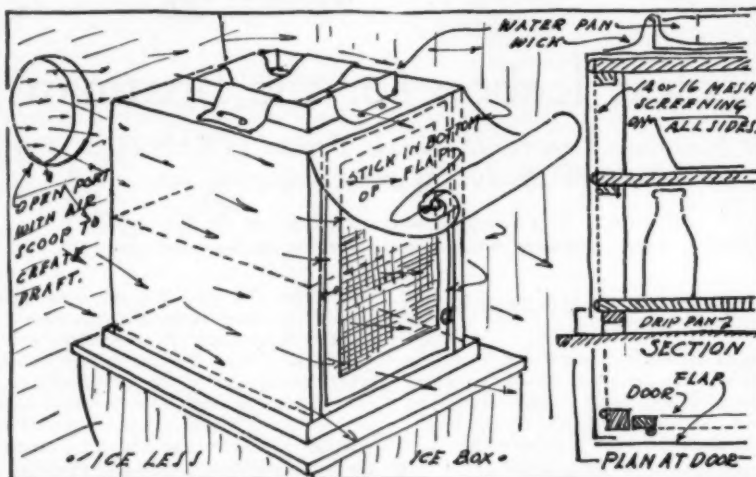
It consists essentially of an open wooden frame with shelves and a door. The sides and the door are covered with galvanized iron or bronze wire screening. The frame is set in a shallow pan made of galvanized iron.

The frame is then covered with a loose fitting cotton flannel cover, with the rough side out and with a lifting flap in front of the door. The cover should be well wetted by soaking in a pail of clean water. On top place a water pan and some wide lamp wicks pinned in place to prevent any movement of the pan.

For operation, the iceless icebox should be placed where there is a draft, next to an open port with an air scoop. The wicks should be of such size to keep the flannel wet at all times. The cooling of the ice box is caused by the evaporation of the water on the flannel taking away the heat.

The fly screening will prevent the contents of the iceless ice box from falling out and will also keep insects out when airing, soaking or washing the flannel.

A. G. W., College Point, N. Y.



A. G. W. has built a simple form of evaporator which can be quickly made out of light wood, and which will function any place where there is a draft

Iceless Refrigeration

Keeping foodstuffs and drinking water in good condition when on an extended cruise to waters where ice is unknown, except in Winter, is essential to the spirits and welfare of the crew. A man can exist for months on hard tack and canned goods with a little water; but—who goes on a cruise for that? Meal time should be the most enjoyable part of a good cruise and fresh meats and vegetables are necessary for the proper kind of a meal.

A temperature of 50 degrees is considered safe for fresh meats, butter, eggs, vegetables, etc., for a few days. Canned goods do not require refrigeration if unopened but they should not be kept in a hot place for an extended length of time.

Sea water is always cool, even in the hottest weather and this fact offers a suggestion towards keeping foodstuffs at a safe temperature. Construct a double box of galvanized or copper sheets, tightly soldered so that water which will be circulated through the jacket can not get

into the food compartment or into the bilge. Solder 1 inch hose connections to the jacket, an inlet low down and the outlet at the opposite side near the top, and make a tight fitting cover for the compartment. Place the refrigerator in such a position that it will all be below the water line and protected from the heat as much as possible. Inlet and outlet connections must be put through the planking, the inlet being lower and provided with a scoop to assist circulation when the boat is running, and connected to the lower side of the refrigerator. The upper connection is led to an outlet, which must also be submerged in order to take advantage of circulation by convection when the boat is at rest. The operation is automatic and no attention is necessary after installation.

The water refrigerator is a practical means of maintaining a temperature lower than the surrounding air without ice; the articles to be kept cool are placed in airtight containers and kept in a light box shaped frame covered with 1/8-inch wire netting. On top of the box place an earthen

dish partially filled with water, and wrap the entire box with burlap, toweling, or other absorbent cloth, the upper ends of which are immersed in the dish. Place the refrigerator in a cool place in such a position that a current of air can circulate around it. On the shady side of the boat, in front of a port provided with a wind scoop or under a cowl ventilator would be a good place.

Several methods of water refrigeration may be devised. For bottled goods, such as milk, cream, drinking water, etc., wrap the bottles in wet cloths and place them in an earthen dish filled with cool water. Such articles as meat, butter, eggs, or vegetables can be kept cool by placing them in air tight containers and inverting an ordinary unglazed flower pot over them and treating as above. Prepare the refrigerator twice daily, by supplying the dish with cool fresh water. Two unglazed earthen crocks, the outer one of double the capacity of the inner one will make a satisfactory cooler. Place blocks in the bottom to raise the inner crock and fill the space around it with cool water. Osmosis will keep the outside damp and evaporation will do the rest.

A more permanent fixture can be made from a sheet metal box having large wire cloth covered windows in all sides. This rests in a tray about 4 inches deep and 6 inches larger than the box, with cleats to raise the box off of the bottom. Wrap the box with several layers of loosely woven cloth as before, allowing the lower ends to extend into and spread out on the bottom of the pan.

(Continued on page 76)

Rules for the Prize Contest

ANSWERS to the questions on page 36 for the September issue, addressed to the editor of *MoToR Boating*, 113 West 40th St., New York, must be (a) in our hands on or before July 25, (b) about 500 words long, (c) written on one side of the paper only, (d) accompanied by the senders' names and addresses.

The names will be withheld and initials used.

QUESTIONS for the next contest must reach us on or before July 15th. The editor reserves the right to make such changes and suggestions in the accepted answers as he may deem necessary.

The prizes are: For each of the best answers to the questions above, any article or articles sold by any advertiser advertising in the current issue of *MoToR Boating* of which the advertised price does not exceed \$25, or a credit of \$25 on any article which

sells for more than that amount. There are two prizes—one for each question—but a contestant need send in an answer to only one if he does not care to answer both.

For answers we print that do not win a prize we pay space rates.

For each of the questions selected for use in the following month's contest, any article or articles sold by an advertiser advertising in this issue of *MoToR Boating* of which the advertised price does not exceed \$5, or a credit of \$5 on any article which sells for more than that amount.

All details connected with the ordering of the prizes selected by the winners must be handled by us. The winners should be particular to specify from which advertisers they desire to have their prizes ordered.

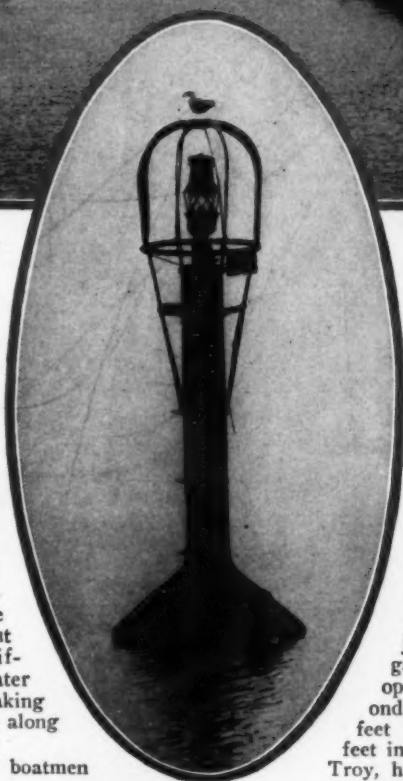


Lock No. 32 in the midst of a prosperous farming section in Genesee County is a control station where all canal clearance papers must be shown

THERE are many evidences that the advantages of the New York State Canal System are coming to be better understood by shippers, boatmen and the people generally. The trouble has been that the public, after making this splendid investment in a modern waterway, which rivals the Panama Canal in importance to commerce, has failed to understand that the Barge Canal is not an enlargement of the old Erie Canal, but an entirely new structure. The present canal connects the same terminals at Troy and Buffalo, but in all other respects it is radically different from the old canal. For a greater part of its way it is a canalized river, making use of the lakes and rivers which are along its way.

Of course, new types of boats and boatmen have been necessary to the new structure. Old canalers, who followed the tow-path, have had to accustom themselves to new surroundings and changed conditions. Staunch high-power tugs have taken the place of the mules of former years as propelling power. Self-propelling boats, with high power engines, capable of floating from 1,000 to 2,000 tons of freight, have made their appearance, requiring men of a higher order of intelligence to operate them. It is apparent that the canal carrier organizations must be organized by men of capital and business sagacity, and be capable of taking care of a large volume of business.

The physical structure of the Canal System is wonderful. It includes 516 miles of splendid waterway. The main canal is 340 miles in length, the Champlain 60, the Oswego 24, and the Cayuga and Seneca 23 miles, including Cayuga and Seneca Lakes, 92 miles. The canal is 12 feet deep and is



The type of lighted buoys used to guide traffic through Oneida Lake which is part of the Barge Canal system, are large and substantial similar to the ocean type

systematically dredged to maintain a free channel. It is 75 feet wide in earth sections of the land line, 94 feet wide in rock cuts, and has a width of at least 200 feet in the beds of rivers and lakes through which it runs.

The locks, of which there are 56 on the canal, are built of solid concrete and operated by electricity. They are filled and emptied by means of culverts, one in each of the side walls, opening into the lock chambers through 20 ports or openings, located just above the lock floor. The lock gates swing on steel pivots and may be opened or closed in something like 30 seconds. The locks are 328 feet long and 45 feet wide, with an inside clearance of 310 feet in length. The locks at Waterford, near Troy, have a combined lift of 169 feet, com-

posing the greatest series of high lift locks in the world. They are five in number and cost about a quarter of a million dollars each.

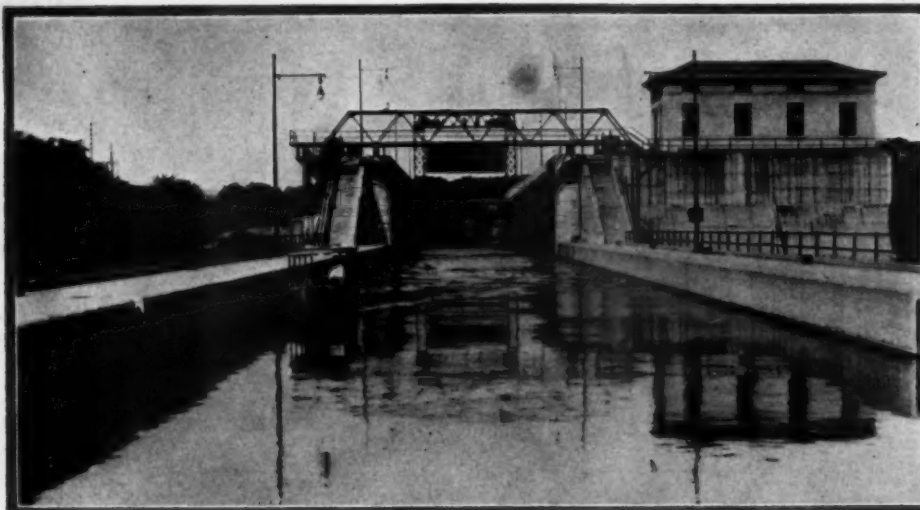
The movable dams, holding back the waters of the Mohawk River to govern the water level in the canalized river bed, the big dams at Hinckley and Delta, where have been created lakes about five miles square for storing water; the massive steel guard gates, for protecting the various locks and other works; the power houses,

where electrical power is created for operating the canal structures; the buoys for lighting the channels of the canalized lakes and rivers—these are part of the features of this great inland waterway.

Traffic on the canals is increasing. During the season of 1921, 359,090 tons of grain were shipped on the canal from Buffalo to New York; 60,539 tons of salt went from the central part of the state; 71,075 tons of lumber were

The Switzerland of the Empire State

Wonders of Nature Mingled With the Industrial Marvels of Cities Along the New York Barge Canal



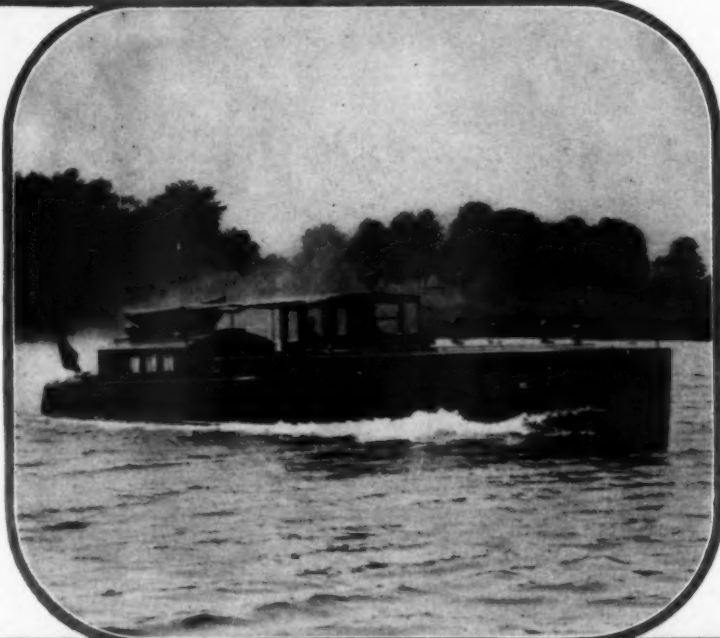
One of the massive pieces of concrete engineering at locks two and three through which the traffic from Cayuga and Seneca Lakes enters the canal

brought from Canada via the Champlain division. The list of materials shipped over the canal is a long one, and it is increasing. With the new and larger boats, and with responsible carrier organizations, the volume of canal business is destined to loom large.

The canal waters primarily are intended for traffic. But they offer a splendid field for the modern motor boat. Many prominent yachtmen have their eyes on the attractions which New York State offers in its wonderful canal system. They are coming to understand that there is a touch of the marvels of Switzerland right here in the Empire State. The Hudson River, as every New Yorker well understands, is a magic stream of beauty, romance and history. The Mohawk River, with its great rocks and cliffs, winds through a region which is celebrated in song and story, and is full of rich tradition.

Central New York has its Finger Lakes region, where fresh water lakes of surpassing beauty are gems in the midst of a rich fruit and agricultural country. Great manufacturing cities and thriving villages are along this portion of the route, and the coal fields of Pennsylvania are within easy rail reach of Watkins, at the south end of Seneca Lake. The Genesee Valley region, where The River Genesee makes its way down to the sea, and where the

A speedy cruiser on Three Rivers where the Oneida and Seneca Rivers unite to form the Oswego River which flows to Lake Ontario



One of the movable dams at Tribes Hill on the Mohawk River, which holds back the waters to provide ample depths for the canal.

city of Rochester is the center of a large manufacturing and agricultural territory, offers attractions for the boatman, and for 60 miles after leaving the city there are no locks to go through. This 60-mile level is through a fine fruit and farming section, with many quiet and beautiful landscapes. From Tonawanda or Buffalo the yachtman can make a trip by trolley or steam road to Niagara Falls.

The Oswego branch of the canal is through a picturesque country, with several active

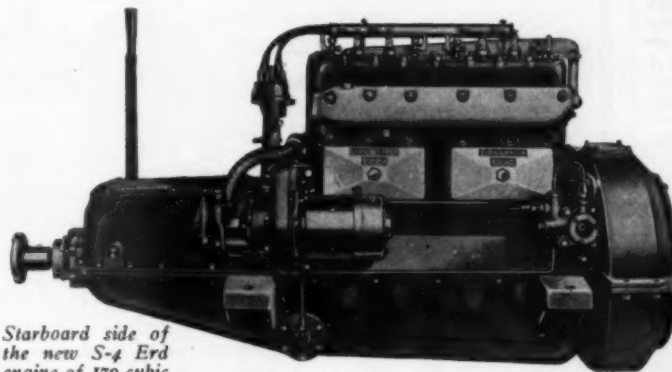
(Continued on p. 76)

Correct Design in Engines

THE point of view of the naval architect and his requirements for suitable marine engine design were forcefully brought out at the spring meeting of the Society of Automotive Engineers in a paper presented by George F. Crouch, an expert in small boat design. As the most recent production since that time, the new four cylinder Erd S-4 marine engine closely complies with the many suggestions made at that meeting.

The new Erd engine is a four cylinder unit of $3\frac{3}{8}$ inch bore by 5 inch stroke equivalent to 179 cubic inches displacement. The power curve below shows that it is capable of producing 13 h.p. at 600 revolutions to a high peak at 2,100, where 42 h.p. are produced. The cylinder castings and head are of cast iron, the head being removable to permit cleaning of carbon and grinding of valves. The manifolds have been designed with great care in order to take care of expansion, and also to provide clean intake passages with a cleverly designed internal hot spot to assist

Attention to Detail and Careful Design Produce an Engine Which Closely Agrees With S. A. E. Recommendations



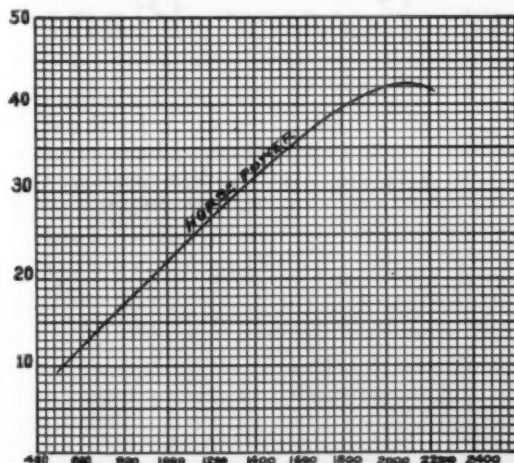
Starboard side of the new S-4 Erd engine of 179 cubic inches displacement

complete vaporization of the fuel.

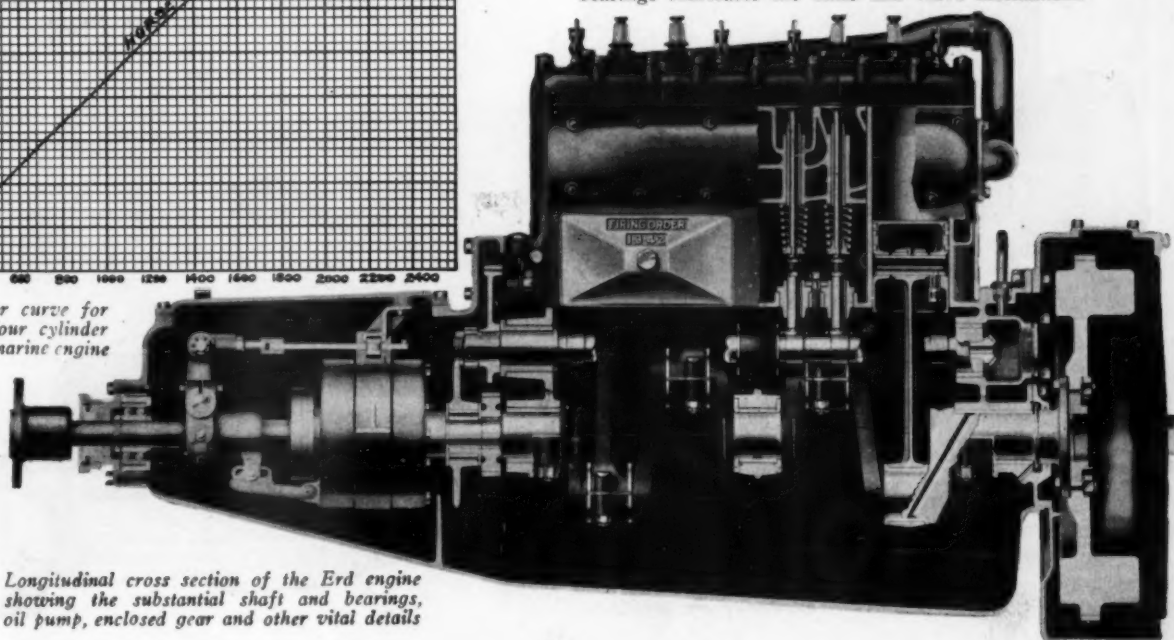
For an engine of this size it is fitted with an unusually massive crankshaft, which is proportioned to maintain an accurate running balance and be free from vibration. It is a heavy drop forging of chrome nickel steel, which gives high tensile strength. There are three large main bearings, the center one being fitted with extra large flanges to take care of end thrust. Provision is made for end play adjustment which is unusual in marine engine practice. The shaft and connecting

rod bearings are split, and adjustments can be made by removing one or more thicknesses of laminated sheet brass shims.

Close attention has been paid to ease of adjustment so that the engine may be constantly kept in good condition without the necessity of completely overhauling it. The valve tappets for example are hollow and of the mushroom type. They are so installed that they may be removed with their guides without disturbing the valves or camshaft. In the matter of lubrication, careful thought has produced a trouble proof system. The oil is pumped by an accessible oil pump which feeds oil to the hollow camshaft which acts as a distributing conduit. Oil is fed from the camshaft through drilled holes in the crankcase to the three main shaft bearings. From here oil is fed through the crankshaft to each of the adjacent connecting rod bearings, while a thin film of oil sprayed from the ends of bearings lubricates the cams and valve mechanism.



Power curve for the four cylinder Erd marine engine

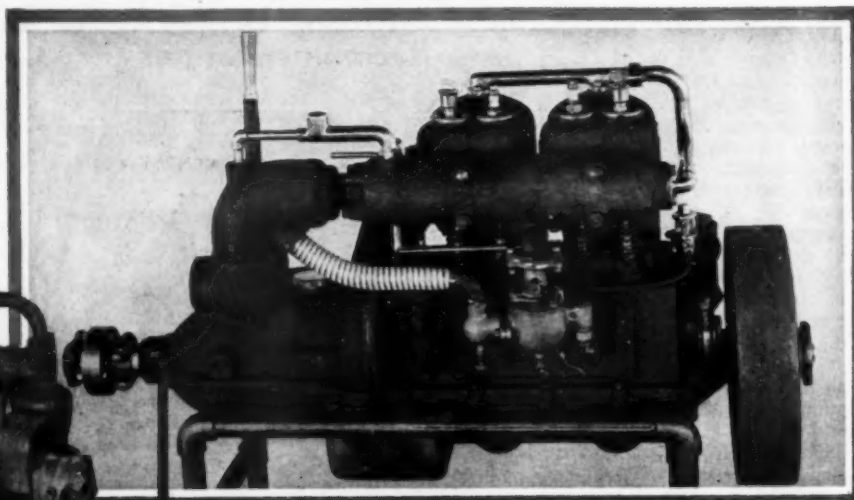


Longitudinal cross section of the Erd engine showing the substantial shaft and bearings, oil pump, enclosed gear and other vital details

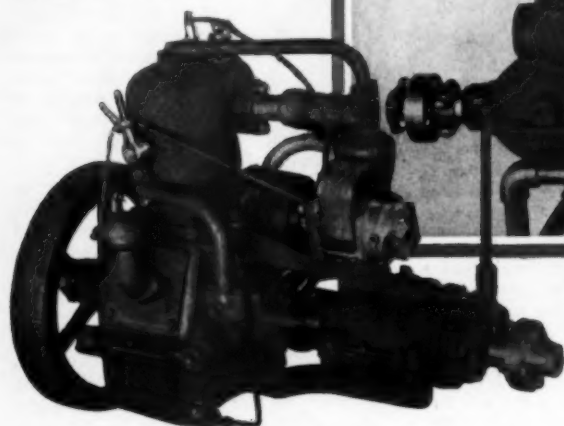
Husky Engines for Smaller Boats

*New Single and Twin Cylinder Units of Substantial Construction
Built By Regal Gasoline Engine Company*

The newest engine of the Regal Company, a two cylinder job with a 4-inch bore and 4½-inch stroke. The machine is pump lubricated by the little pump on the rear of the crankcase. A dripping trough for the connecting rods takes care of the cylinders. Ignition is by Bosch magneto with impulse coupling

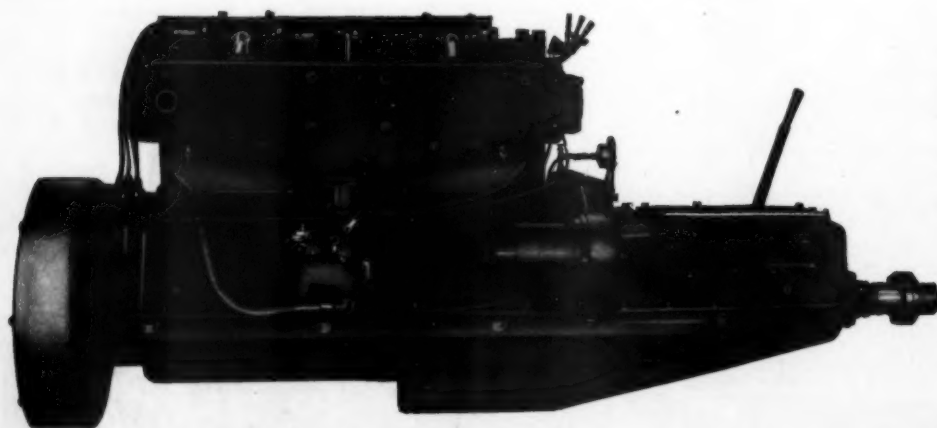


The little 2 h. p. self-contained engine and reverse gear made by the same company is a handy little unit of 3¼-inch bore and 3½-inch stroke, with a weight of only 165 pounds. This is also pump lubricated and magneto equipped



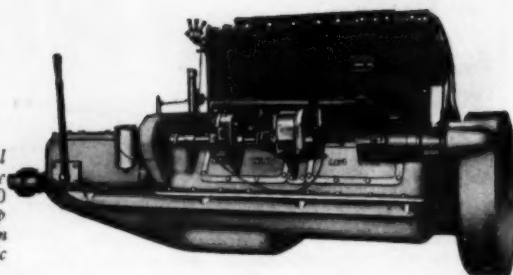
BIG CHIEF, A Complete Power Plant

Newest Development of Red Wing Thorobred Marine Engines Being Produced in Medium and High Speed Types Suitable for All Boats



For heavy cruisers the Red Wing Motor Company have developed their new Big Chief 40-60 h. p. engine with a bore of 5-inches and stroke of 7-inches. The heavy duty type is built with iron castings, while the lighter weight is fitted with aluminum crankcase and oil pan

Parts for these machines are very substantial and lubrication by a direct pressure feed. The heavy machine has a speed range up to 900 r. p. m., while the high speed job will turn up to 1400. Paragon reverse gears are built in to make a unit plant. Twelve volt electric auxiliaries are supplied



The East Builds to Race the West

A CHALLENGER for the famous Gold Cup is being built in New York City. It was in 1904 that the Columbia Yacht Club of New York City, then the foremost racing club in the country, presented to the American Power Boat Association, the Gold Cup, to represent the speed championship of America and be competed for annually. The Gold Cup was won away from the Columbia Yacht Club in 1905 and has never returned. The clubs of the Thousand Islands, Lake George and Detroit, have won and successfully defended the trophy against all comers since 1905.

Last fall the members of the Columbia Yacht Club decided that it would be a good thing for racing in the East if some one would build an eastern boat to race at Detroit on August 30 next in an effort to bring the Gold Cup back to New York. So George F. Crouch was commissioned to design a Gold Cup boat and Henry B. Nevins of City Island was given the contract to build Miss Columbia, as she will be named.

Miss Columbia is in every sense a real boat. No attempt has been made at soap box construction. She is sev-

DATES OF IMPORTANT CHAMPIONSHIP RACES

- July 3-6—Annual Regatta, Mississippi Valley Power Boat Association, Oakhosh, Wis. A. T. Griffith, Secretary, Peoria, Illinois.
- July 3—Middletown, Conn. to Sachems Head, Conn. Classes for cruisers and express cruisers. Minn S. Cornell, Jr., Middletown, Conn.
- July 3—New Orleans to Pensacola 200 mile cruiser race. Thomas Burns, Southern Y. C., New Orleans, La.
- July 4—Annual Regatta, Raritan Yacht Club, Perth Amboy, N. J.
- July 4—Sachems Head, Conn. around Falkners Island and return.
- July 5—Sachems Head, Conn. to Lloyd's Harbor, Long Island. Classes for cruisers and express cruisers. M. S. Cornell, Jr., Middletown, Conn.
- July 12—New Rochelle to Block Island, New York Athletic Club, open to cruisers. E. H. Tucker, Chairman, 110 William St., New York City.
- July 20—Cruiser Races, A. P. B. A. Rules, California Yacht Club, Long Beach, Calif.
- July 27—August 3—Ocean Races, Rockaway Point Yacht Club, Rockaway, N. Y.
- July 31—Long Distance Ocean Championship for James Craig Trophy, Columbia Yacht Club, New York City to Shelter Island, Long Island. C. F. Chapman, Chairman, 119 W. 40 Street, New York.
- July 31—Mamaroneck, N. Y. to Shelter Island, L. I. Cruiser race for MoToR Boating Trophy. Open to cruisers 25 feet to 70 feet. L. W. L. W. Roy Halsey, Chairman, Mamaroneck, N. Y.
- August 2—Handicap Cruiser Championship of America, Shelter Island, N. Y. Open to cruisers 30 to 45 feet. L. W. L. W. Bradford, Chairman, 154 Montague St., Brooklyn, N. Y.
- August 7, 8—Annual Regatta, Miles River Yacht Club, Mt. Michaels, Maryland. W. Bigelow, Chairman, Easton, Md.
- August 8-15-22—National Trophy Race, Lake George, New York. Lake George Regatta Ass'n, R. E. Henry, Chairman, Hague, N. Y.
- August 9, 17—Handicap cruiser Championships, Southern California Yacht Racing Association, Los Angeles, Calif.
- August 10—Hydroplanes and speed contests, Broad Channel Yacht Club, Broad Channel, N. Y.
- August 14-16—Annual Regatta of Buffalo Launch Club, Buffalo, N. Y. John A. Williams, Chairman, 2978 Main St., Buffalo, N. Y.
- August 20-Sept. 1—Annual Gold Cup Regatta, Detroit Yacht Club, Detroit, Michigan. W. D. Edenburn, Chairman, Hotel Addison, Detroit, Mich.
- March 20-21, 1925—Annual Southern Regatta, Miami Beach, Fla. Championship Races for Hydroplanes and High Speed Runabouts. Carl G. Fisher, Chairman, Miami Beach, Florida.

eral feet longer than the minimum length allowed and nearly a foot wider than any boat which raced for the Gold Cup at Detroit last year. Miss Columbia is built throughout of mahogany, double planked and if her speed compares at all with her fine looks, and construction, she should provide excellent competition at the races on August 30 at Detroit.

Miss Columbia's power plant consists of a motor of about 625 cubic inches piston displacement especially built for the boat and race. Although at this writing the boat has not been launched and therefore it has been impossible to make any speed trials, yet it is expected that a speed of close to fifty miles an hour will be shown. She will be handled in the Detroit races by the Editor of MoToR Boating.

The building of Miss Columbia marks the first attempt made in New York to send a boat to Detroit to race against the country's fastest craft, in the biggest motor boat regatta of the year. If Miss Columbia is successful in winning the Gold Cup, it will mean that the 1925 event will be held in Eastern waters for the first time in many years.



Miss Columbia, being built by the Columbia Yacht Club at Nevins' Yard. She is the first eastern challenger for the A. P. B. A. Gold Cup in 20 years

Yard and Shop

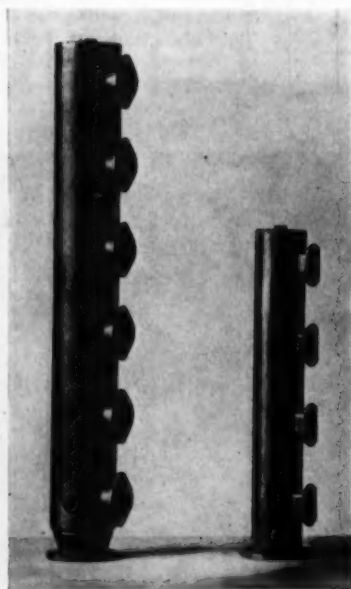
Notes of Interest to Both Owner and Manufacturer

Boat Sales Tax Repealed

AS most readers have undoubtedly learned before this the signature of President Coolidge to the 1924 Revenue Act, has, among other things, repealed the ten per cent sales tax which was in effect on new boat construction. We have learned that the exact date and time in which this repeal act becomes effective will be midnight, July 2. Under the new bill, all excise taxes previously levied will continue in force for thirty days after the President has signed the act. Accordingly all sales made after midnight of July 2 are no longer taxable. It is hoped that the destructive effect of this tax will be quickly outgrown, and that the motor boat building industry will now again take rapid strides forward.

Outboard Engines with McNab Rudders

A very clever series of booklets has been prepared showing the advantages of equipping all makes of outboard engines with the well-known McNab maneuvering rudder. A separate book-



Excellent examples of copper smithing for manifolds as used on some forms of engines. These are entirely waterjacketed with bronze fittings completely welded together. The Miami Copper Company are carrying these in stock



Leviathan Jr. which is claimed to be the smallest cabin cruiser in the world by O. J. Hanssen of Port Siuclaw, Oregon, its proud owner. The length is 135 inches and it is driven by an Elto outboard engine in a very satisfactory way

let has been prepared showing the details of attachment and operation for each of the several makes of outboard engines which are now in popular use. The advantages of equipping these engines with these rudders are many. The remarkable control obtained by using these enables the fisherman to regulate his speed to the exact requirements of trolling and any angler who has stalled his motor in an attempt to slow it down sufficiently to lure his game from the waters will realize the advantage of controlling his speed to just the right point. The ability to reverse quickly and also to control the boat in a sideways direction is valuable, and the pleasure of boating with these little engines will be greatly

enhanced by the addition of this maneuvering device made by the McNab Corporation of Bridgeport.

Increased Forces for Smith

Edward Smith & Company have found it necessary to again increase their sales force and have added J. C. Tills, who will represent them in Chicago and Geo. W. Allen, who will cover Pittsburg and the surrounding country. Both of these men have had long experience in the application of paint and varnish as used in all branches of industry.

Changes in Pilot Rules

The Steam Boat Inspection Service is about to issue a new circular for the regulation of motor boats which embodies some revisions over previous additions. The most important of these is a revision in the necessary dimensions for wood floats which may be used as life saving devices as substitute for life preservers. These may be not less than four feet in length, 14 inches in width, and 1 3/4 inches in thickness, not exceeding 25 pounds weight. Hand holes should be provided on (Continued on page 62)



Margaret, a fast runabout owned by Wm. Ott of La Crosse, Wis. She is 32 feet long and was built by the Albany Boat Corporation and is powered with a 200 h.p. six cylinder Hall-Scott marine engine which drives her about 36 m.p.h.



A New Type of Marine Flyer —Valsparred, of Course!

SEA Sleds—an innovation in speedy pleasure craft!

Planned and built by The Sea Sled Company, Ltd., of West Mystic, Conn., Sea Sleds embody every possible refinement that makes for swiftness, luxury and sea-worthiness. And as they are designed for discriminating owners, only the best materials and finishes go into them—which explains why Sea Sleds are protected with Valspar.

These master boat builders know from long experience that Valspar is the only

varnish which will stand up under all kinds of weather—proof against oil, gasoline, the drive of salt water and the racking vibration of powerful engines.

Even after months of exposure on hull, cabin-hatch or deck-house, Valspar retains its original smoothness and lustre. It never turns white.

Valspar is made only by Valentine & Company. For all marine uses—on all types and sizes of craft—Valspar is everywhere recognized as the finest varnish obtainable.

This coupon is worth 20 cents to \$1.60

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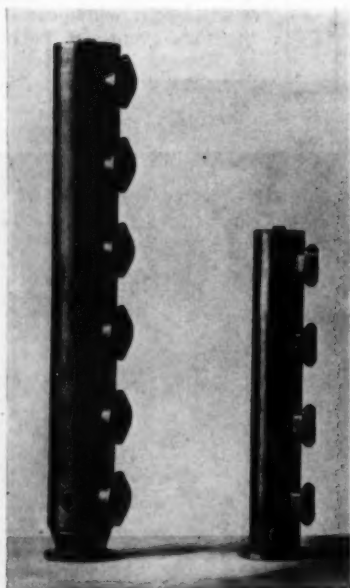
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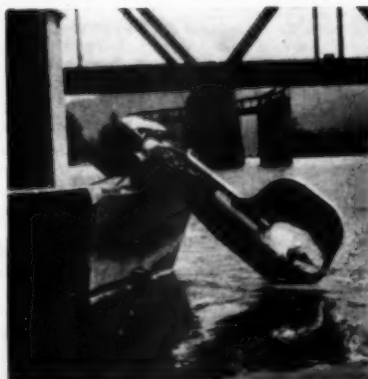
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A 50 FT. TWIN SCREW MOTOR YACHT, operating free of vibration, with remarkable seagoing qualities. Developed from famous GAR JR. II., which is officially credited with cruiser speed record of 44.6 miles per hour, and which has covered OVER 60,000 miles WITHOUT A BREAKDOWN!

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Save time by traveling back and forth from your Summer home aboard a GAR JR. FLYER. Avoid the heat, dust and inconvenience of commuting by motor or rail.



The roomy bridge deck and forward cockpit seat 12 persons

Power plant consists of two twin-six "Liberty" motors developing 450 H.P. each, perfect in balance and control, absolutely reliable, and practically automatic in operation.



GAR JR. II completing record-breaking run from Miami to New York (outside route) 1260 miles at sea in 47 hours 23 minutes running time (21 min. less than schedule train time of famous "Havana Special")

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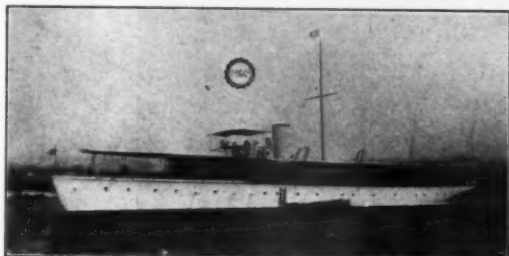
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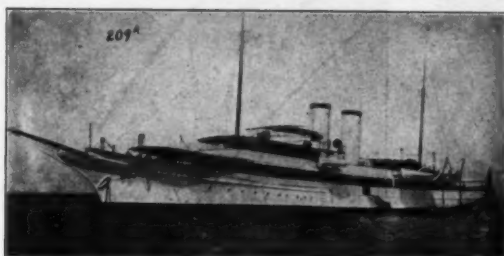
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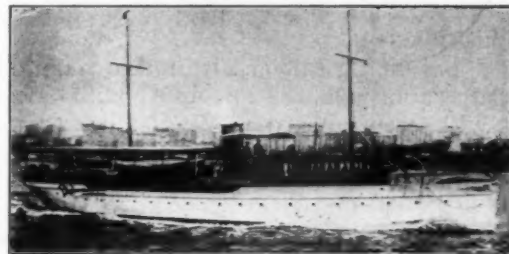
On this page are shown a few representative yachts selected from our large lists. Should none appeal kindly acquaint us with your requirements. Full information regarding costs to build, purchase or charter yachts of all types gladly furnished.



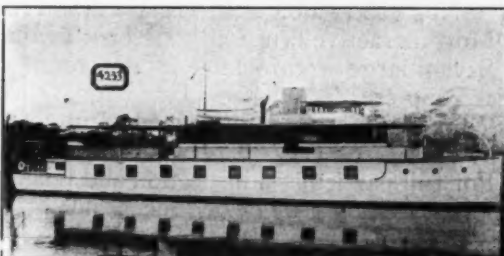
No. 1466—For Sale or Charter—Particularly attractive, 138 ft. steel twin-screw cruising power yacht. Speed up to 18 miles; two 300 H.P. air starting, reversible Standard motors. Beautifully finished and furnished. Large dining saloon in forward deckhouse; social hall or music room in after deckhouse; three double and one single staterooms and two bathrooms aft. Cox & Stevens, 25 Broadway, New York.



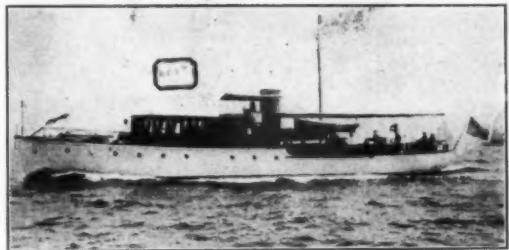
No. 209—For Sale or Charter—Large, sea-going steam yacht. Palatial accommodation. Sacrifice for immediate sale. Several similar larger and smaller available craft. Cox & Stevens, 25 Broadway, New York.



No. 1820—For Sale or Charter—Twin-screw 98 ft. motor yacht. Speed 14 miles; two 6 cylinder, 125 H.P. Standard motors; large dining saloon in deckhouse forward, three double, one single staterooms, two bath and toilet rooms below aft. Handsomely fitted and furnished. Large deck space. Adapted for both Northern and Southern cruising. Price low. Cox & Stevens, 25 Broadway, New York.



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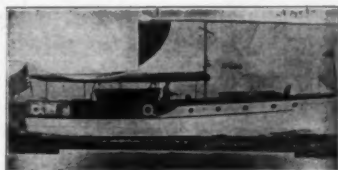
No. 603—FOR SALE—Twin-screw cruising power yacht, 83' x 14' 3" x 4' draft. Speed up to 14 miles; two 6 cylinder, 115 H.P. Speedway motors, new 1921. Large deckhouse forward containing dining saloon; 2 double staterooms, bath and toilet room below aft. Handsomely finished and furnished. Price attractive. Cox & Stevens, 25 Broadway, New York.



No. 2758—For Sale—Exceptionally roomy power yacht; 65 x 13 x 3' 6" draft. Speed 10 miles; 65 H.P. 20th Century motor. Accommodations include double and single staterooms, saloon with two transom berths, bath and toilet room aft; dining saloon in deckhouse forward. Deck space unusually large. Independent electric light plant. Cox & Stevens, 25 Broadway, New York.



No. 3944—For Sale—Twin-screw cruiser; 60 ft. x 12 ft. x 3 ft. 7 in. draft. New 1920. Speed up to 14 miles; two 50 H.P. Sterling motors. Stateroom, saloon, bath and toilet, galley, etc. Price attractive. Cox & Stevens, 25 Broadway, New York.



No. 2830—For Sale—Attractive 50' bridge deck cruiser in excellent condition. Two cabins, large afterdeck. Equipped with 50 H.P. heavy duty motor. Speed 11 miles. In commission. Cox & Stevens, 25 Broadway, New York.



No. 3622—BARGAIN—High speed 48' Twin-screw cruiser. Speed up to 28 miles; two 175-200 H.P. six cylinder Sterling motors. Double stateroom with toilet room forward; aft saloon with two pullman berths, toilet room and galley. Large cockpit. Cox & Stevens, 25 Broadway, New York.

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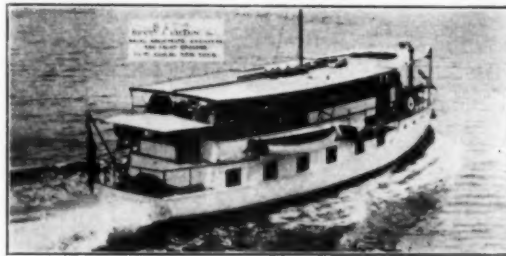
Seven large comfortable staterooms, two baths, big dining saloon, also music room on deck, fine crew's quarters, large roomy after deck. Cabins all well appointed with finest of equipment, completely furnished in commission with crew aboard ready for immediate delivery.

For full particulars, inspection and trial run.

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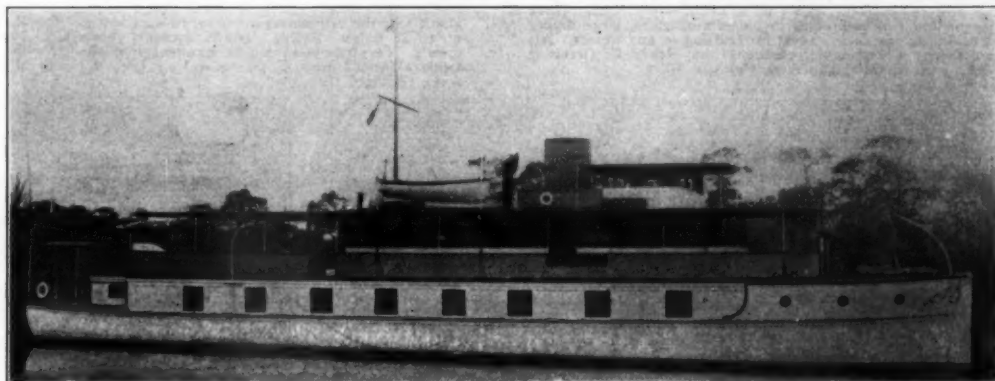
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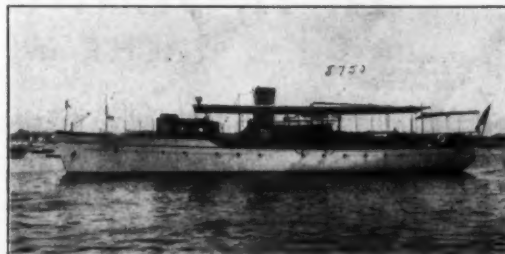
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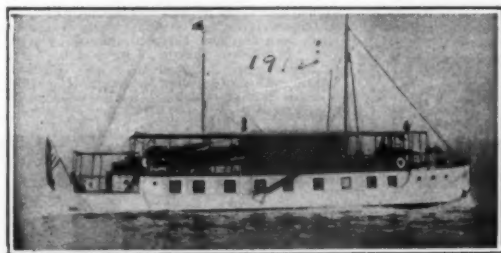
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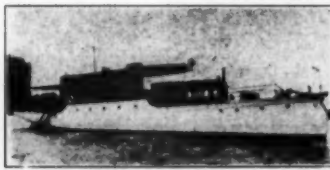
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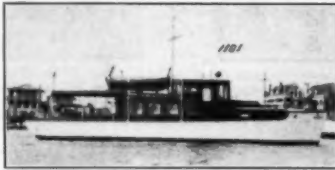
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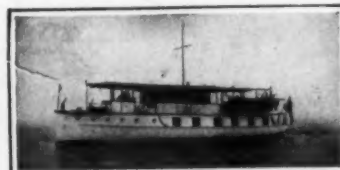
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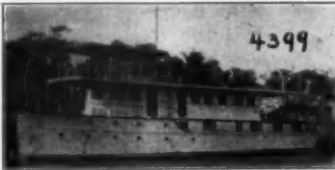
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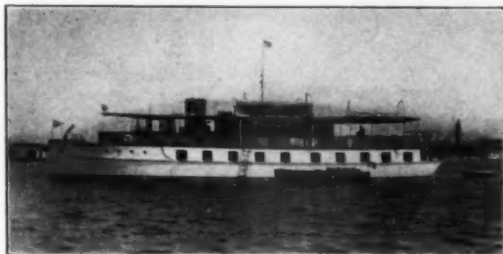
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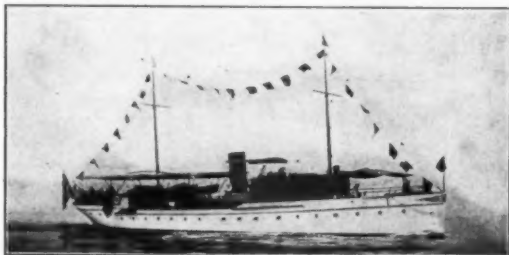
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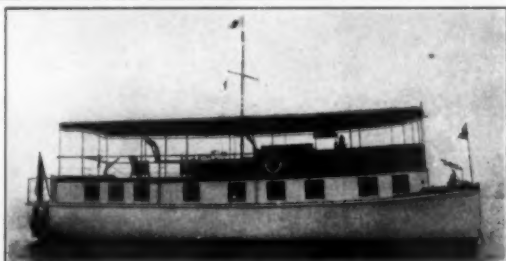
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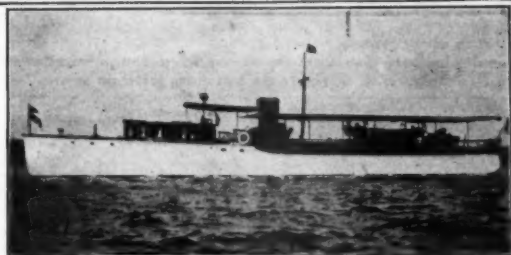
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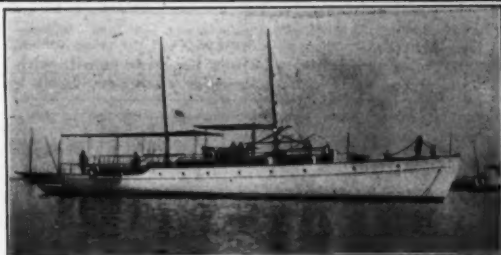
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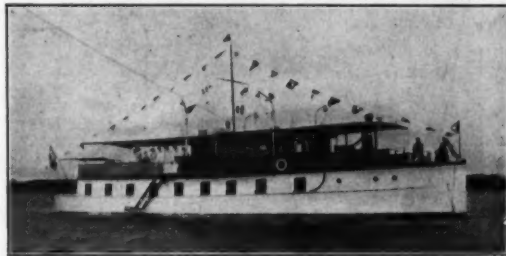
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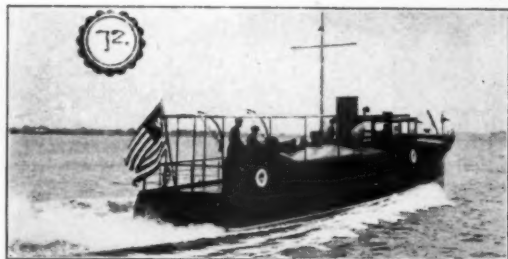
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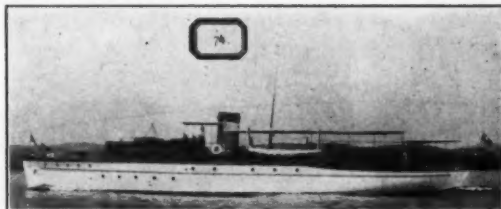
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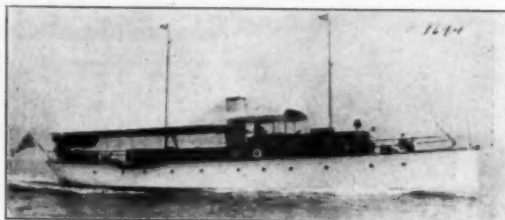
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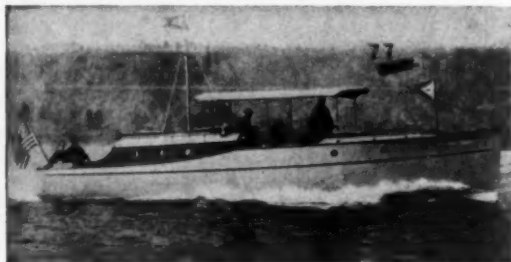
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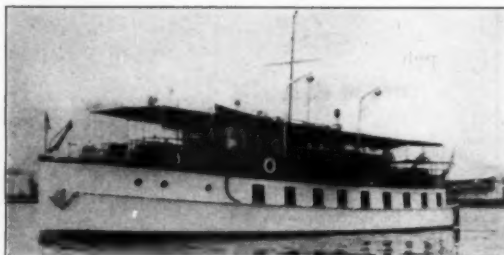
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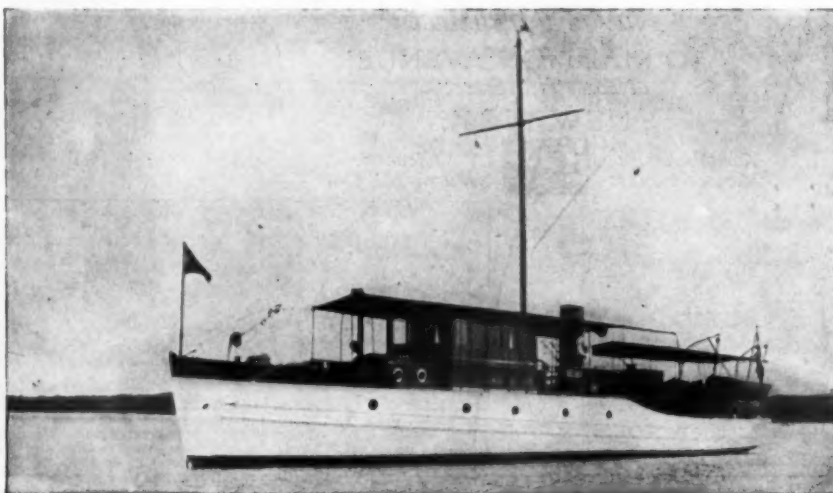
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 52' x 12' x 3' 6" Inclosed Bridge. 450 H.P. Liberty.
 57' x 11' x 4' Large Inclosed Bridge. 125 H.P. Van Blerck.

HOUSE BOATS.

- 45' x 14' 6" x 3' Houseboat, 24 H.P. Buffalo.
 52' Mathis Houseboat, Standard engine.
 73' x 16' 6" x 3' 6" Houseboat. (2) 50 H.P. 20th Century engines. three double and two single staterooms, large deck saloon, handsomely furnished.
 80' x 17' 6" x 3' 3" Houseboat, 70-90 H.P. (2) Standard engines.
 100' x 22' x 4' Houseboat. (2) Fairbanks Morse engines. Seven staterooms.

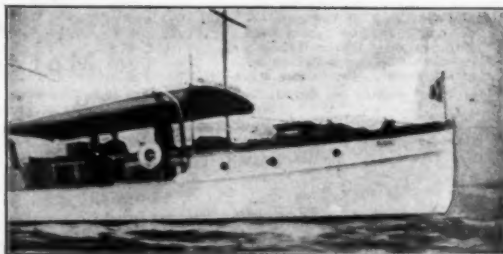
AUXILIARIES.

- 26' x 8' x 3' 6" Auxiliary Yawl. 6 H.P. Caille.
 38' x 11' 4" x 3' 6" Auxiliary Yawl. Palmer engine.
 40' x 12' x 3' 6" Auxiliary C. B. Sloop. 6 H.P. Lathrop.
 53' 5" x 12' x 7' 6" Auxiliary Sloop, Bridgeport motor.
 55' 6" x 18' 6" x 5' Schooner Yacht, Excellent condition. Will sell cheap.
 60' x 16' x 4' Auxiliary Schooner, Frisbie engine.
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 And many other type yachts and commercial boats.

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The Firefly, 36' x 9' x 3' 8", bridge deck cruiser, one man boat. Boat and engine built by Woods & Chute of Greenport. Heavy construction. Engine 4 cylinder, 46 H.P. heavy duty Bosch equipped. Two cabins, sleeping four. Electrically lighted and started. Finished in enamel and mahogany. In absolutely perfect condition. Now in commission.



27 FOOT LAUNCH HULL

One left of our Standard Hunting Cabin Launches, 7 ft. beam, 2 ft. draft. Has a large comfortable cabin. Large cockpit. These launches are handsomely finished, fast, able and very easy in rough weather. Built in our best fashion. A great Bargain. Write us for particulars.

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4 1/2" x 3/4" hammered Piston Rings....	.10
Westinghouse Starting Motors.....	8.00
Westinghouse Generators to match.....	10.00
3/8" or 1/2" vertical or horizontal Priming Cups, long shank.....	.10
3/8" or 1/2" Pet Cocks.....	.10
Peru Model Engine Co., Inc., Peru, Indiana.	

Navy Hull For Sale—35 feet overall by 8 feet beam. Double planked, copper sheathed to waterline. Excellent condition. Ready to install engine and cruise. W. T. Wieder, 225 Fifth Avenue, N. Y. C.

For Sale—One-fourth the original value, one 60 H.P. heavy duty "Mogul" four cylinder, four cycle, engine, 5 1/2 x 7, weight 1300 lbs., complete with carburetor, H. T. magneto, water and oil pumps, 7 jet Detroit lubricator, suitable for marine, tractor or stationary work. Guaranteed good as new. Price \$250.00 cash on crate f. o. b., Peru, Indiana. Over 2000 of this type in use. Peru Model Engine Company, Inc., Peru, Indiana, U. S. A.

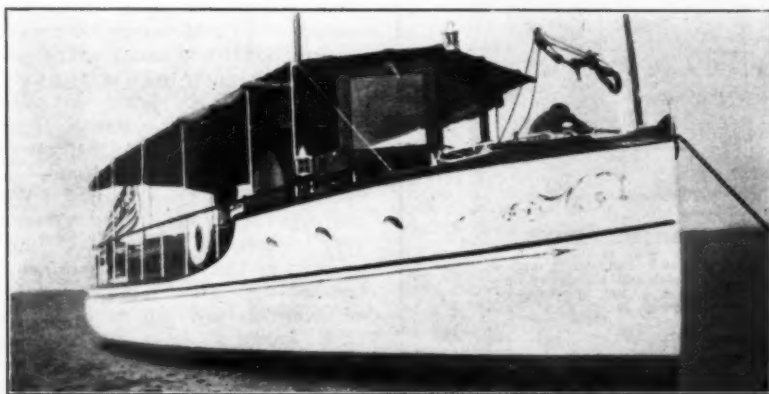
Wanted October, inspection, delivery, excellent condition, auxiliary, maximum 5 ft. draft, 20 ft. W. L., ample headroom, cabin, 2 berths, refrigerator, galley, enclosed toilet. Water gas tanks, large cockpit. Send sketch and photograph B. C. Hart, Caixa Postal 1653, Rio de Janeiro, Brazil.

New Kermath Engines, bought at forced sale, will sell cheaply to quick buyers. 1 only each 4-5, 6-8, 12 H.P. Last has electric starter. Foster & Co., 24 State St., N. Y. City.

For Sale—Johnson Outboard Detachable Motor, used two weeks only. Only reason for selling is that I purchased two Johnson Motors and have use for only one. Will sell reasonable. Percy M. Child, 1110 14th St., N. W. Washington, D. C.

For Sale—New 50 H.P. Kermath; aluminum base; two Ignition systems; two spark plugs to cylinder; in original crate as shipped from factory and paper not removed; less than factory cost. Unable to use. This is a beautiful motor and a considerable saving can be made. Box 8, Windsor, N. C.

30 H.P. "Erd" Petrol Engines 4 x 6 four cylinder, four cycle, weight 900 lbs., complete with Governor, Kingston Carburetor, Swiss H. T. Magneto, Water Pump, Spark Plugs, \$140.00 cash packed for export and delivered f. o. b. New York. These engines are offered at this enormously reduced price to clear, and are just the engine for heavy duty Marine Work. Inspection invited at New York Warehouse. Peru Model Engine Company, Inc., Peru, Indiana, U. S. A.

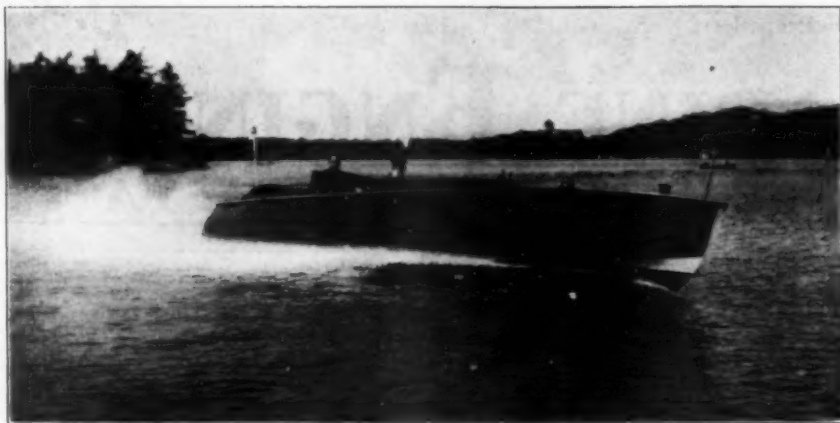


FOR SALE—Double Cabin Bridge Deck Cruiser

47' 6" O.A.—Beam 11' 6"—Draft 3' 6". Powered with 4 cyl. 6 1/2" x 8 1/2"—20th Century Motor. Interior and exterior finished in mahogany, copper fastened throughout. Boat and engine in first class condition. White Pine planking. Built by New York Yacht, Launch & Engine Co., Morris Heights, N. Y., and delivered new in May, 1922. Speed, 11 M.P.H. Full headroom in cabins. Boat now in commission, ready for use. Completely overhauled and repainted. Can be seen by appointment. Telephone Main 7510, The Bank of America, Executor, 166 Montague St., Brooklyn, N. Y.

FOR SALE

FISHER TROPHY TYPE RUNABOUT

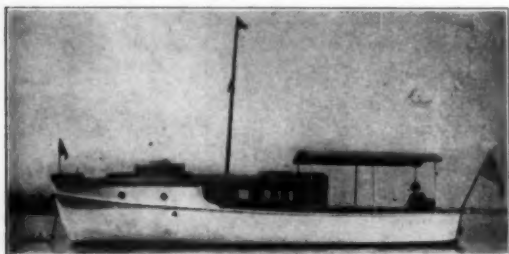


New 35 foot long 6 foot beam V Bottom, Varnished, Mexican Mahogany Runabout, designed by Prof. Crouch, built under my personal supervision. Equipment complete, finest detail, cost of over \$12,500 including searchlight, One man English Burbank Auto Top, Windshield (Gray pressed leather cushions, Auto type), Chairs, Carpets, Flags, etc.

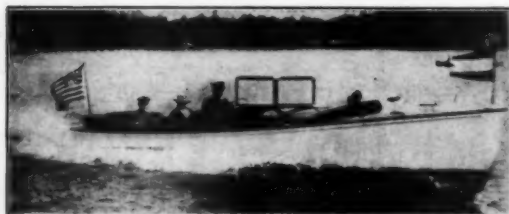
Sterling Dolphin, Special 6 cylinder, 300 H.P. Motor. One of the fastest and consistent boats of its kind. Can do better than 45 miles and makes the so-called "Hair-pin" Turns beautifully.

Also 32 foot, round bottom, runabout, complete equipment, 100 H.P. Sterling Motor, everything perfect and a good 30 mile family boat.

Boats are to be sold at a real bargain, as I am giving up my summer home. Can be seen at 1000 Island Park, N. Y. Appointments arranged, week-end preferable. Dr. George H. Stephens, 643 Park Ave., Syracuse, N. Y.



31' x 8' x 2' 8" finest construction and condition throughout, full head-room, five berths, white enamel and mahogany finish, new 24 H.P. Palmer, 4 cylinder, 4 cycle, \$2,500, in commission. Wm. C. Atwater, Jr., Owner, 1 Broadway, N. Y. City. Phone Bowling Green 8421.



No. 4399—For sale at exceptionally low figure—30 ft. runabout, automobile control; large cockpit, seat twelve people. Speed 28 miles: equipped with 110 H.P. Sterling motor 1921. Construction of the best. Mahogany deck. Can be inspected near New York by applying to Cox & Stevens, 25 Broadway, New York. Telephone 2700 Whitehall.

BOATHOUSE—With 3 cottages in connection; 3 separate plants with more than 1,000 canoes. Old established business that clears the owner \$8,000 and better every year. Buildings, canoes, workshop and 3 cottages go with the business. Boat livery brings in \$300 week. Boat storage, \$275 week. Rental from cottages \$35 week. This is a gilt-edge proposition that will bear the strictest investigation. The books are open to the buyer if desired. We seldom have the opportunity to offer anything like it at the very beginning of the season. Owner is anxious to retire and has quoted a sacrifice price. Can be handled with \$10,000. If you are interested in an investment that will make real money, see this. O. E. Treace & Co., st., Indianapolis, Ind.

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by Alfred F. Loomis

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For Sale—Used 33 ft. by 9 ft. standard Rochester Cruiser, fully equipped and powered with 4 cylinder, Model E Scripps motor. Speed 12 miles per hour. Cost \$6,000 in 1922. Will sell for \$4,000. Can be inspected and demonstrated at our yard.
ROCHESTER BOAT WORKS, INC.
10 Charlotte Station Rochester, New York

- 4 cylinder 4 cycle 5" x 6" Clifton 20 H.P. at 500 R.P.M. reverse gear, battery ignition \$450.00
 - 3 cylinder 4 cycle 5 1/4" x 6" Jager, 18 H.P. at 650 R.P.M. reverse gear, Atwater Kent ignition \$325.00
 - 3 cyl. 4 cycle 3 3/4" x 5" Buffalo 12 H.P. reverse gear, sight feed oiler, Atwater Kent ignition \$200.00
 - 4 cyl. 4 cycle 5" x 6 1/2" Standard 24 H.P. at 450 R.P.M., almost new reverse gear, mechanical oiler, double ignition \$980.00
 - 3 cyl. 4 cycle 6" x 8" Standard 27 H.P. at 400 R.P.M., reverse gear, mechanical oiler, double ignition \$650.00
- All the above engines are in good running condition.
Marine Equipment & Supply Co., 116 Walnut St., Philadelphia, Pa.

Offer wanted for 28 x 8 raised-deck cruiser; 16 H.P., 4 cylinder, 4 cycle Palmer motor. Toilet, electric lights, tender and full equipment.
S. M. Cobb, 210 South St., Boston, Mass.

- 1—20 H.P. Unit F. Bosch magneto \$425.00
- 1—12 H.P. Unit F. Bosch magneto 375.00
- 1—12 H.P. Unit C. Atwater Kent 300.00
- 2—12 H.P. Separate F. Bosch magneto 150.00

These motors have all been overhauled, re-tested, refinished in absolutely perfect condition. Guaranteed for a period of one year just the same as a new motor. Kermath Mfg. Co., 5880 Commonwealth Ave., Detroit, Mich.

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Friction contact with engine flywheel.
3 sizes.

A tremendous success—a high-speed, bronze Power Pump for \$15.00
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**TRIMOUNT
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BILGE PUMPS**
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(Old timers prefer them)
QUANTITY (1)—Standard marine, vertical fore and aft compound, 5 3/4 x 12 x 8—75 H.P. 400 R.P.M. on 185 lbs. steam pressure, equipped with link reversing and lever throttle valve—Price to build \$3000. My price while they last \$300 each f.o.b. cars New York.

QUANTITY (2)—Standard marine, vertical fore and aft compound, 4 x 8 x 6—50 H.P. 350 R.P.M. on 175 lbs. steam pressure, equipped with link reversing and lever throttle valve—Price to build \$2500. My price \$200 each.

QUANTITY (3)—Standard marine, vertical fore and aft compound, 3 3/4 x 7 3/4 x 6—45 H.P. 350 R.P.M. on 175 lbs. steam pressure, equipped with link reversing and lever throttle valve—Price to build \$2000. My price \$200.

These engines were built by the U. S. Navy and are guaranteed to be in first class condition. Write to me on your steam engine problems. I will solve them. Any type boiler can be used with these engines.

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A pocket flashlight that never fails to light. No troublesome, expensive or disappointing battery. Just a few pressures of the hand and you generate your own electricity. Nothing to short circuit, get out of order, or fail. Impervious to moisture. Its name is "Sure-Flash". Write for folder. Chidsey Co., 110-112 E. 13th St., New York City.

For Sale—Universal engine, 12 H.P., 4 cyl., 4 cycle, in fine condition, used very little. Price, \$200.00. Fred Battelle, 431 West Main St., Waterloo, N. Y.

Canadian Bargains. Used engines, 2 horse power to 250. Some items 3 H.P. Wilson \$60. 12 H.P. Universal \$325. 36 H.P. Red Wing with starter, \$800. 75 H.P. Sterling \$800. 200 Hall Scott Marine \$3,500. 250 Sterling eight with starter \$900. Canadian Beaver Co., 137 Lake St., Toronto, Can.

University man, former U. S. Navy quartermaster, capable of taking complete charge of craft, desires place on private yacht. At liberty after June 10. Address L. J. F., 613 S. Henderson St., Bloomington, Ind.

For Sale—Cruiser 40 x 9 1/2, seaworthy, comfortable, Palmer 4 cyl. engine. New, modern conveniences, complete outfit. 1 man control. Rieger, 521 W. 151st St., New York City.

For Sale—26 foot speed boat designed for Sweep Stakes Class. GREAT LAKES BOAT BUILDING CORPORATION, Milwaukee, Wis.

FOR SALE—Runabout Panhard, Mississippi Valley Champion 1921. Electric Starter, etc. Ready to run. Also motors all kinds 25 to 400 Horsepower including Erd 30 Horsepower. F. T. Holliday, Indianapolis, Indiana.

Liberal Loans made on boats, New York vicinity. Write Robinson, 100 West 54th Street, New York City.

For Sale or Charter—52 ft. bridge deck cruiser, twin screw bridge control. Newly fitted with all accommodations, 2 double staterooms, dining saloon, 2 toilets, galley, icebox, gasoline capacity 250 gals., water tank 100 gals., electric light, new awnings, new dinghy, boat has been out four seasons, copper sheathed bottom, seaworthy. Speed 10-11 M.P.H. Now in commission New York waters. For further particulars address McTor Boating Co., Box 117.

FOR SALE—Classy mahogany trunk cabin cruiser, 27' x 7', 14-20 h.p. Redwing. A-1 order. Sacrifice. R. Tiedemann, 144 41st St., Corona.

Big Free List 100 engines, 1 to 220 H.P. Send for it and state your power needs. 6 H.P. Gray, two cyl. 65—15 H.P. Ferro, two cyl. \$95; 18 H.P. Fairbanks-Morse, three cyls. \$115; 25 H.P. Ferro, three cyl., \$165; 24 H.P. Waterman four cyl. light weight, \$145. Four cycle, 12 H.P. Buffalo and gear, \$135. 16 H.P. Dunn four cyl. \$85. 20 H.P. Truscott three cyl. 6 x 6, \$225. 16 H.P. Holliday two cyl. 6 x 7, \$185; 20 H.P. Doman two cyl. 7 x 8, \$275; 40 H.P. Campbell 4 cyl. 6 x 6 and gear \$425. 50 H.P. Clifton 4 cyl. 6 1/4 x 6 1/4 and gear \$450. Bosch magnetos, carburetors, generators, starters, at low prices. Badger Motor Co., Milwaukee, Wis.

Free Illustrated Literatures. New Rebuilt Engines, Outboards, Clutches, Gears, Joints, Pumps, Hyde Propellers, Stoves, Cruisers, Runabouts, Canoes, Camping Outfits. Canadian Boat & Engine Exchange, Toronto.

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The Hudson River Yacht Club is prepared to accept new members under advantageous conditions. Attractive clubhouse, restricted membership, good anchorage, most convenient location. Commodore E. Spindler, Hudson River Yacht Club, West 92nd Street, New York City.

For Sale—24 x 5 ft. motor boat, 12 H.P. 2 cylinder engine, reverse gear. \$175.00 F. Gleason, Auburn, N. Y.

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STORAGE—REPAIRS—MARINE RAILWAY

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Changes in Pilot Rules

(Continued from page 46)

be provided on each side not less than six inches by two inches, with a one-inch margin on the outside edge. Another change is one of importance. It provides that salt and sand as a means of extinguishing burning gasoline are no longer approved. Fire extinguishers of an approved type must now be carried on all motor boats when being navigated. It also provides that when motor boats are not being navigated, no equipment is required with the exception of an anchor light after sunset, and the regulation Custom House numbers.

A Fast Skiff

Boatmen throughout the country are showing a decided preference towards the dory type of boat construction. Fast skiffs built on the lap strake construction method and fitted with powerful engines are now being built in many yards. An exceptionally fast boat of this type is the Lake Michigan Sea Skiff, being built by the White Lake Boat Company at Montague, Mich. The design of these boats has been so worked out that they are remarkably dry, seaworthy, and fast. For fishing and general all around boating service, they make an ideal craft. The power plant installed in these is the model F-4 Scripps engine, with electric equipment, and the power produced is plenty to drive these boats at twenty miles per hour. They will throttle down slowly to a convenient trolling speed, and then are ready for a fast run home. This boat at present is being built in a 24-foot length and 7-foot beam. The material and workmanship which goes into them is high grade in every respect, and the product is a remarkable value for its moderate cost.

Steel Boats

Many refinements and improvements have been made in the standardized steel boats, made by the Mullins Body Corporation of Salem, Ohio. Safety is a factor which has been given careful attention by their engineers, because above everything else a boat should be safe. All Mullins boats are standardized, so that every boat of a particular model is exactly the same as every other one of the same pattern. The complete line includes small boats and launches for many purposes. A specially designed boat to be used with an outboard motor, as well as row boats for family and livery use. The 18-foot launch is a useful family boat which is moderately priced. It is designed for comfort and service, and still has a speed of 11 miles. It will seat ten persons, and is equipped with a 5 h.p. Lockwood-Ash engine, with Bosch magneto and Joes reverse gear. Another type is fitted with the 9-12 Universal, four cylinder engine, which gives the higher speed. The frames are of heavy oak, with steam bent ribs. Steel for the hull is of heavy gauge galvanized steel, pressed to form in powerful presses. All rivets are soldered, which gives practically a welded joint with no leakage. Puncture proof air tanks are built-in in the bow, insuring safety.

The outboard special is a boat which has been designed to meet the demands for a craft suitable for the attachment of an outboard engine. It is equipped with air tanks and full equipment. Its length is 16 feet, and altogether it makes a most attractive boat for this purpose.

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23 Years Experience

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347 MADISON AVE., NEW YORK

An Impulse Coupling

An improved design of adjustable impulse coupling, intended for use with Bosch high tension magnetos, has just been announced by the American Bosch Magneto Corporation, Springfield, Mass., which is highly efficient and dependable. The purpose of this new impulse coupling, known as the type IC-200, is to facilitate starting of heavy duty gas engines on boats without the aid of an auxiliary battery system. The coupling is a spring device which is entirely enclosed, so as to make it dust proof and indestructible. Its assembly is very simple, and it can be quickly taken apart and re-assembled if desired, or the direction of rotation changed. The driving member is adjustable for timing and through the use of a coupling disk, a flexible and definite drive is achieved. Back firing is prevented by this device.

Eisemann Magneto Corporation Moves

The Eisemann Magneto Corporation has removed its Executive, Accounting, Sales and Advertising Departments to 165 Broadway, New York, N. Y. William N. Shaw, President, will be in charge, assisted by R. N. Patterson, Assistant Treasurer; T. E. Kennedy, General Sales Manager; E. S. Clark, Advertising Manager; B. B. Woodford, Sales Engineer; and E. J. Goggins, Credit Manager. The Purchasing, Production, and Service Departments will remain at the factory office at Brooklyn, N. Y.

Mr. Shaw, President of the Corporation, is now on an extended cross country trip, and will make a thorough survey of business on the coast, returning to New York via Canadian route later. A San Francisco branch has been opened and reports increasing activity there.

A Royal Super Propeller

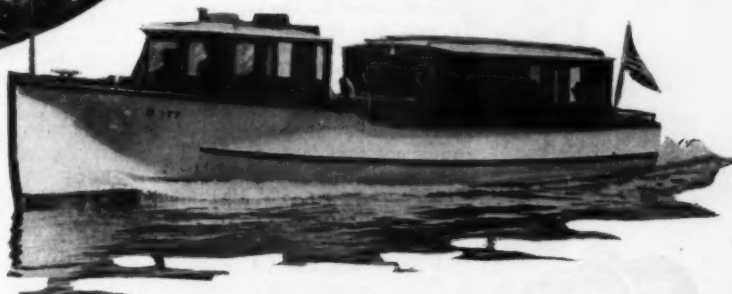
A patented propeller which has a decidedly different appearance from the usual is being made by R. C. McKenney & Co., Ltd., West St. John, New Brunswick, Canada. This wheel has much greater blade area at the tips of the blade, and no power is wasted near the hub. The outer driving blade is flat and averages more thrust astern than other propellers. It has an advantage somewhat similar to that which a long oar has over a short one, or results in securing a gain in speed with the same amount of power.

The manufacturers of this propeller are open for negotiations with responsible parties in the United States, with regard to manufacturing this propeller in this country. In order to introduce these wheels to American users, a special discount is being allowed on orders.

(Continued on page 114)



"Sprig II," a 35 ft. V-bottom U. S. Navy Captain's Gig, refitted by Garbutt & Walsh of Wilmington, Calif., for the Montezuma Gun Club. The new 75-100 H. P. six cylinder Hall-Scott Marine Engine, model H. S. M., gives it a speed of 16 miles per hour.



Below is "Lady Mary," a 35' x 8' 6" round bottom U. S. Navy Captain's Gig, rebuilt by Geo. Kneass Boat Works, San Francisco, for Mr. Frank Drake of Berkeley, Calif. The new 50-70 H. P. four cylinder model H. S. M. drives it 12 miles per hour.

Converted Navy Gigs Repowered by

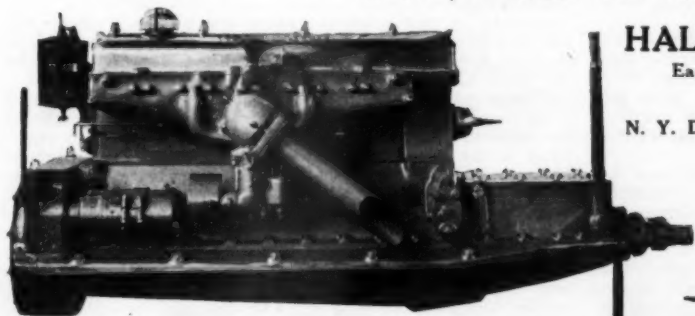
HALL-SCOTT

How about rejuvenating your boat with a new Hall-Scott Marine Engine? It isn't necessary to build a new hull; you can save time as well as money, and get all the thrills, all the renewed interest of a brand new boat, by putting in a new engine of more up to date design, higher efficiency and greater reliability.

A large proportion of the Hall-Scotts we have built for marine use are purchased for repowering boats which have lost their snap and interest. Scores of successful installations have proved Hall-Scott supreme for this purpose. The converted navy gigs shown above are among the first installations of the new H. S. M. models.

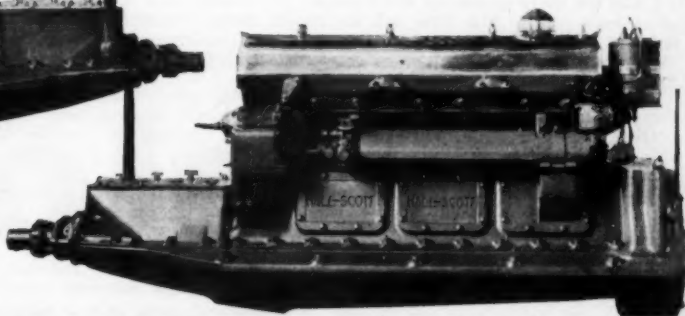
Hall-Scott Marine Engines are conceded by automotive engineers to be the last word in refinement of design, efficiency, quietness and fuel economy. The question of how to produce a boat that creates honest enthusiasm is solved by the selection of a Hall-Scott.

Write for details and boat pictures.



H. S. M. Series.
4 1/4", Stroke 5 1/2". Four
Cylinders 50-70 H.P.
Weight 1,275 lbs. Six
Cylinders 75-100 H.P.
Weight 1,525 lbs.

L. M. Series. Bore 5",
Stroke 7". Four Cylinders
125 H.P. Weight
1,175 lbs. Six Cylinders
200 H.P. Weight 1,400
lbs.



HALL-SCOTT MOTOR CAR CO.

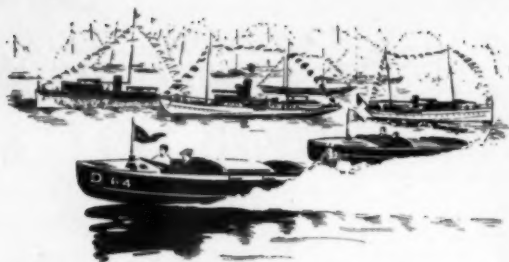
Eastern Branch: 887 Niagara St., Buffalo, N. Y.

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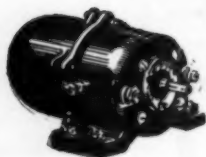
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STANDARD The World Over

Boats Never Were a Hobby with Me Says W. C. Ware

(Continued from page 15)

rakish craft; the Ella Ross was inclined to list to port while the Varuna was a speed merchant. I think the Varuna once steamed into a speed of 12 miles an hour; the Ella Ross wheezed atrociously when crowded into eight miles while the Deseronto could be depended on to do 14 miles in 90 minutes. So, you see, we had the logs pretty decently named—in relative size, displacement and general cussedness.

I was the shore captain of the Varuna. My brother was the shore mate of the Ella Ross and my cousin, being a country lad, was given the sporting advantage of owning the Deseronto. We sort of divided him up, in other words. Didn't want him to win and, yet, didn't want him to lose.

I was piloting the Varuna into a very successful race when the Ella Ross, propelled by a long stick in the hands of my brother, side-swiped the Varuna and pocketed it against the side of the bridge. With the Deseronto chugging—this official noise was engendered by my cousin's tongue and throat and, as an imitation, was first class for a young country fellow who hadn't been to the city much—was creeping up.

I overreached myself. Had too much confidence in the visual length of my pole.

The water welcomed me.

In addition, my mother had brought along but a single suit

—the one I had on—and I had to spend the ensuing few hours going around in my uncle's flannel nightshirt (those were old-fashioned, non-advertising days) to the accompaniment of smart talk from country hayseeds who were my inferiors in experience and general all-around worldliness. My age, at the time, was eight years.

* * * * *

In these few words I have endeavored to give the reason for my very youthful aversion to boats and water, in general. I thought of those days—and the sheer joy I had missed—when I talked with W. C. Ware, of the Fay-Bowen Engine Co., Geneva, N. Y.

Ware is not only a builder of boats but, since the time he can remember, has been a boat enthusiast. Perhaps, when he was quite young, his mother didn't look behind his ears every morning to see that he had scrubbed himself. Personally, I still think that was one of my mother's complexes; personally I grew up to despise soap and water and those two ingredients are necessities if a man is to putter around engines, or boats.

"Guess I was always building boats," laughed Ware. "Boats never were a hobby with me; they fitted, perfectly, into my scheme of life. When I was a kid I always wanted—and generally had—the niftiest boat of the neighborhood so it was perfectly natural that I should, in later life, get into the business."

"As a business, for my future, I became seriously interested in it in 1900 when a chum of mine, going east from the home town of Dayton, O., wrote me of an opportunity at the Fay-Bowen company, in Auburn, N. Y. He painted the word picture in such glowing terms that I wasted little, or no, time in getting in touch with the company. That is, in getting in personal touch. Not much time was lost by myself in packing my bags, leaving Dayton and arriving in Auburn."

"I found that the boat and engine works were in separate plants. They could not be together because there was no water at the engine plant. I immediately became connected with the concern and in 1911, when Mr. Bowen died, I became vice-president. Two years later, when Mr. Fay dropped out of the active management of the business, I was elevated to the presidency."

"I have said that the boat and engine works were separated because of the absence of water at the engine plant. It did not take long to combine the two into a single industry at Geneva."

"The years that have passed in my present connections, have been the happiest years of my life. I think of men in other lines of manufacture and I frequently wonder if they get the complete enjoyment out of their business that the average motor boat builder gets from his. I don't believe so, because, nowhere, it seems to me, is there such unstinted business enthusiasm as there is among motor boat builders and fans, in general."

"To me the industry, today, is one with a real problem to lick. A problem, such as we have, always makes a fight attractive. Our problem is the problem of sales—getting reliable, responsible dealers. A similar problem exists all through the motor transportation business—even seeps down into the tire industry. But, we are becoming standardized—slowly and surely. Most companies, today, give their agencies whole-hearted support and when this condition exists there is certain to be co-operation from the man who is actually selling the public."

"In other words, I believe that much of the grief that has come to motor builders, and builders of motor boats, has come because we have been responsible for it. We have not been sufficiently careful in our selection of representatives, or in the marketing of our property. There are plenty of signs that the industry is going to grow into first rate importance during the next few years. The congestion on the highways is driving the people back to their natural playground—the water."

"The water was the first playground of our ancestors and it is no more than natural that it should come back, as such, to us. Something, however, should be done to secure anchorages; as it is now there are far too few of them. Under present circumstances boathouse space is too restricted. In the large cities a boat owner usually has to travel miles before he can reach the place where his craft is moored and in the inland lakes there is always the danger of ice breaking down the houses and slips. It seems to me that the government, collecting as it does a great deal of money from boat owners in the way of licenses, should do something to furnish an answer to the taxpaying boat owner. The state and national governments spend millions of dollars every year in the cause of good roads—and it is money well spent—but little is done in the way of making our lot a happier one."

* * * * *

Ware is a keen business man. That can be told by a glance at him. Also, he is a salesman who knows his product—inside and out.

(Continued on page 66)

Radiola Super-Heterodyne

(second harmonic) semi-portable, in mahogany finished cabinet, with separate Radiola Loudspeaker. With six UV-199 Radiotrons, but without batteries - \$286
Same as above, but without Radiotrons or Loudspeakers - \$220



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Take It Aboard

No antenna. No ground connection. Not a wire to fasten! Take it up by its handle—and take it aboard. And when you are miles from land, sit and listen to programs from all over the country. Dance aboard ship to far inland orchestras. Keep up with the news.

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Boats Never Were a Hobby with Me Says W. C. Ware

(Continued from page 64)

While I was talking with him a man and his wife chanced along. Excusing himself, Ware went over to where they were standing. I was interested in his approach.

He didn't ask the stock question of—

"Is there something I can do for you?" or "Are you interested in buying a boat?" or "Can I show you something?"

This was his opening salutation—

"It's a beautiful boat," and he stood, with admiring eyes looking at the handsome craft.

"It is—a dandy," agreed the man.

"I love it," breathed his wife.

"What's the price?" the man questioned.

Ware did not answer. Instead he took the couple aboard, showed them everything that was to be seen, discussed technical points of the motor with the man and the exquisite furnishings with the woman and so interested them in what they were seeing that price was forgotten. When they were standing outside again, Ware mentioned the cost, in an offhand manner and the man, glancing at his wife, said—

"I'll take it."

Forms were drawn up, a check was passed and the new owner began to grin:

"You know, Mr. Ware," he observed, "my wife and I just came in here to look around. We had figured on buying a boat but thought your product was a little beyond our speed for a first adventure. We had been figuring on buying something at a lesser price and working up—sort of like the man who buys a Ford and later becomes a Lincoln prospect. But we're satisfied. Glad we came. When can you have our boat delivered?"

Afterwards I questioned:

"Perhaps they couldn't afford to put that much money into a boat?"

Ware laughed.

"That man could buy half a dozen such boats and not miss the money," he returned. "He isn't in the class that needs to be stepped-up. I believe that, in purchasing this boat, he has become a real motor boating enthusiast. He has a good boat and one that will not make deep inroads into his pocketbook in keeping it in running order. He will not sour on motor boats—as many buyers do—because of unfortunate experiences. This was the boat he wanted and he just needed to be given a little encouragement."

"Why didn't you call one of your salesmen?"

Because I knew this man to be one of those who wants the boss of the business to wait on him. There are such customers and every concern has had experiences with them. Furthermore, he didn't need to be sold. All that was necessary to do with him was to confirm his own impressions. Those impressions were written all over his face.

So, you can see, that Ware is an observer. He doesn't rip and snort at the adjectives—as so many salesmen do—but simply talks in a quiet, convincing voice; there is enthusiasm in that voice and it is an enthusiasm that is apparent but not argumentative. He is the type of man who will always get things done—in his own way of doing them—and those who do not know him will wonder how it happened. For, I don't believe him to be what, in a popular term, is called a slave driver. I take him to be a man who will sit down with those who work with him, reason things out and then take off his coat and cry:

"There's no use sitting around any longer—let's go in one end of this proposition—and, come out the other!"

New Hall-Scott Model

Plans for the coming year at the Hall-Scott Motor Car Company plant include the production of a new four and six-cylinder unit, with a bore and stroke of $4\frac{1}{2}$ by $5\frac{1}{2}$ inches. These motors are to be entirely enclosed and the last word in internal combustion engineering. Exhaustive tests of this engine have been made in busses which have shown that they are capable of pulling thirty passenger inter-urban busses at 50 m.p.h. speed, over 100,000 miles, without the necessity of valve grinding, taking up on bearings, or other adjustments of this sort. These motors are intended to turn up at a high rate of speed and can operate at 1800 r.p.m. efficiently. The newer models of the larger size marine Hall-Scott engine are now being fitted with a 12 volt Delco type starter and generator. This is a more powerful unit than a six volt starting outfit previously used, and both the four and six-cylinder 125 and 200 h.p. sizes will be fitted with it. These new models are now available in stock at Buffalo, and can be promptly shipped within twenty-four hours.



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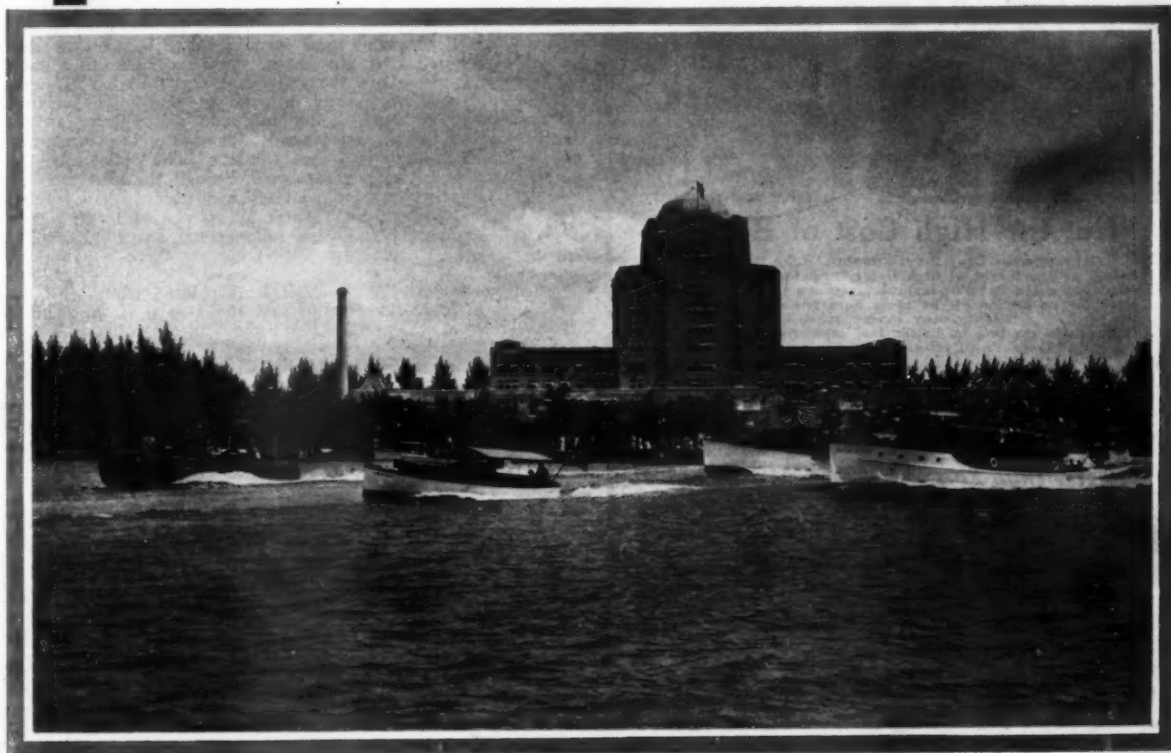
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Huck Says—I Nearly Takes a Sail on Lake Michigan

(Continued from page 27)

gentlemen that never strikes a woman except in anger and can resist anything but temptation and was described by some low person in that poem that read,

*This is the Land of the Pilgrims
 The home of the Bean and the Cod
 Where Cabots speak only to Lowells
 And Lowells speak only to God.*

And he says "Oh" just like that and tells me I can probably get a boat if I sees the club manager, but I says I sees too much of club managers already, so I gives up the idea.

Well, Chap, so I only has one experience on the water. I goes to take a picture of the Nimp I refers to and she has on one of those hats what is like a bucket upside down and what covers up everything but the chin—the kind you is apt to speak to the wrong girl unless you is very careful—and I says take it off and she takes it off and it blows off the dock and as I is always a hero in emergencies like this, I climbs down a ladder so quick-like that my foot it slips. I puts my foot in the hat all right and I keeps going a ways and about a hundred people what has nothing to do but loaf around the promenade, they seems to think a accident like this it is funny, but I doesn't see anything funny about it and the Nimp, she doesn't let me take a snap shot at all and we beats a hasty retreat. So we steadies our nerve by going down to the Drake Hotel and we is ushered into the main dining room and after they gets through setting out enough cutlery for a full course dinner, the headwaiter he says what will you have and I says, "We will each take a glass of milk" and he says "Is that all?" and I says yes that is all and I says to you, Chap, that is all, for Chicago.

Coot, a 27-Foot Skipjack Schooner

(Continued from page 33)

power than this. A single cylinder two cycle is shown in the plans; but a four cycle of one or more cylinders would do as well. One advantage of the small high speed motor in an auxiliary is that the propeller will be small and consequently there will be but little drag while the craft is under sail; and too, most of the little four cylinder machines are fitted with electric starters which makes the lighting problem very easy to solve.

The exhaust line in a sailing craft is always a troublesome thing because the motor is usually low in the boat, often well below the water line in some installations. This means that the exhaust must be led straight up from the motor to a point at least 12 inches above the water line and then led aft with sufficient drop to carry away the cooling water. The vertical part of the line should be dry and the cooling water should be injected at the highest place in the line and so arranged as not to drain back into the cylinders. The outlet must be through the stern transom, and not through the counter.

Coot has sleeping accommodations for four which is enough for a small cruising boat. There are plenty of lockers, both for clothes and food, ice chest, toilet, stove, etc. The alcohol stove might be changed for a Shipmate as there is room for one of the latter.

The interior will look well if it is painted white with the exception of the cabin carlins and the fronts of the bunks; these should be varnished. Head room in the cabin is 4 feet 8 inches; don't raise the freeboard or the cabin house to gain more headroom than this. If you do Coot will not sail well; and will look badly. Too much height spoils a sailing boat.

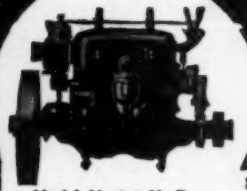
I have tried to make the lettering clear on the plans and easily read. However, there may be an advantage in having a set of prints from the original drawings and if any of our readers wish these they can be obtained at nominal cost by addressing F. W. Horenburger, 4263 Byron Ave., Bronx, N. Y.

Concerning Whitaker Designs

Morris M. Whitaker, N. A., having definitely retired from the professional side of boat designing, has turned over his complete files of original plans and tracings to the firm of Ford & Payne, with offices at 41 East 42d Street, New York, N. Y. It is intended to supply prints of these various designs to owners of Whitaker boats, and others at nominal prices. Plans for stock boats are included in the files and almost any requirement can be filled.

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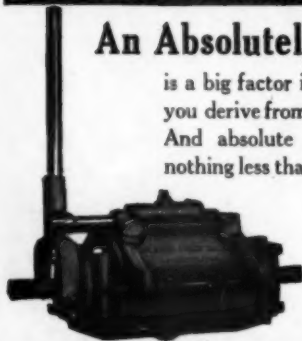
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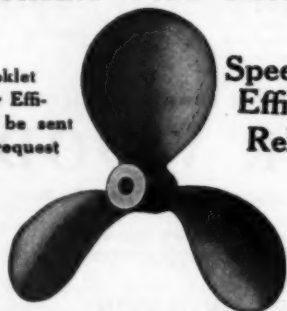


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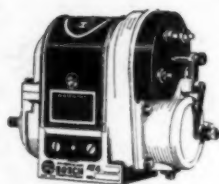


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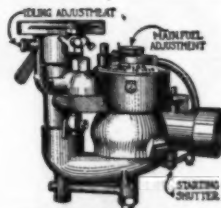
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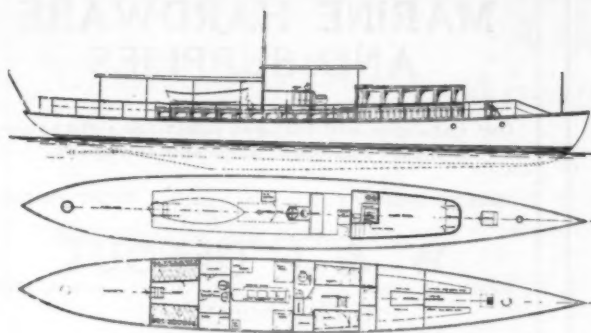
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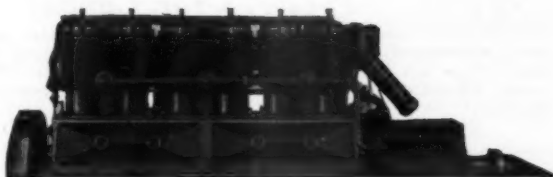
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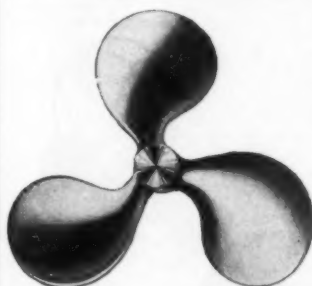
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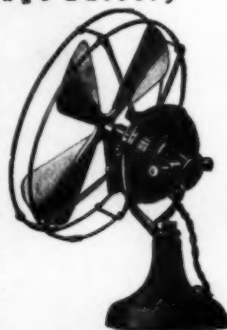
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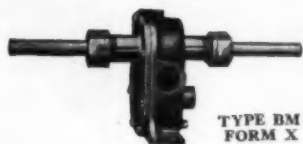
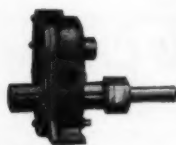
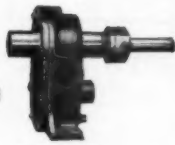
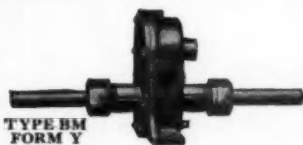
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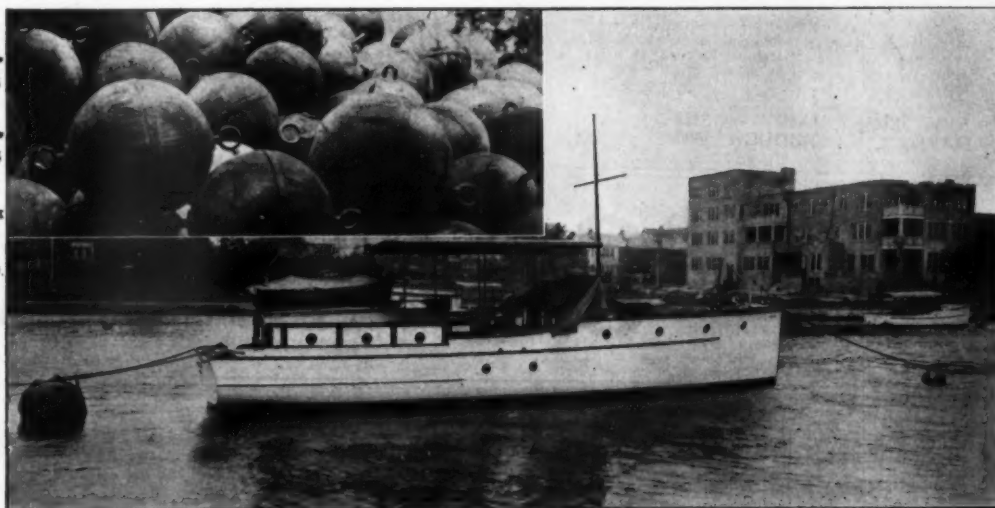
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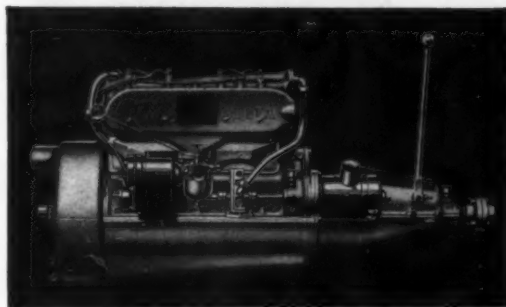
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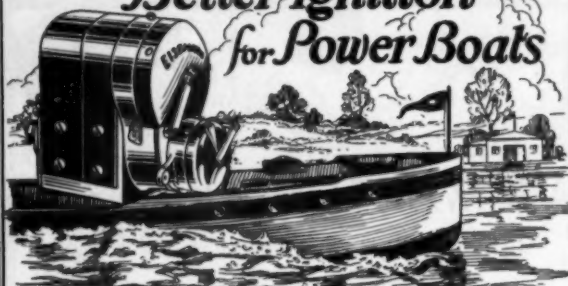
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The Switzerland of the Empire State

(Continued from page 42)

villages where the paper industry flourishes. The city of Oswego at the canal terminal on Lake Ontario, is a manufacturing town, and with the completion of a new State grain elevator, now in process of construction, bids fair to become a shipping port of much greater magnitude than at present. Its piers and docks were formerly active centers, and the Barge Canal will bring back its former supremacy in this respect.

The Champlain division is of one great beauty and historic interest. Lake Champlain, through which Burgoyne sailed, is rich in its historical associations, while the battle fields of Saratoga, where this same British general met his overwhelming defeat at the hands of the intrepid Americans, is only a few miles back of the canal—which is, in fact, the upper Hudson River canalized.

It is not strange that motor boat travelers are asking about the New York State Canal System, and investigating the immense possibilities offered by its waters. It is a wonderful waterway, through a most magnificent country, set in marvelous scenery, rich in legend and the most sacred traditions of our national birth. It was built at the cost of many millions of dollars for the uses of trade and commerce. It will serve a great purpose in the industrial life of the state and the nation, reaching as it does the great empire which surrounds the Great Lakes. But it also affords a splendid opportunity for motor boat owners who wish to enjoy a summer trip into a country of varied charm and beauty.

Iceless Refrigeration

(Continued from page 40)

Refrigeration is not accomplished by making cold but by the extraction of heat through the expansion of a gaseous medium which has been compressed to a liquid, and to a lesser degree by evaporation. The dense air system employs the expansion of cooled compressed air as a refrigerating medium. The evaporation principle upon which the water refrigerator operates is, that evaporation requires heat and as the water evaporates from the wrapping heat is absorbed from the nearest source, which is the container and its contents. As the water evaporates it is replenished by the capillary attraction of the wrapping and the operation is continuous.

The efficiency of the water refrigerator may be improved by releasing cooled compressed air against the wrapping. Surround the refrigerator with a coil having many small jets so drilled that the air brushes the sides of the wrapping and lead the supply pipe outside along the keel to cool the air before expanding. The efficiency can be still further increased by placing the coil inside the wrapping. The air from an electric fan or any sort of a blower directed against the outside will accelerate evaporation.

A practical scheme for prolonging refrigeration with ice is to use a fireless cooker or similar device for an ice chest; placing the ice in a pan so that the water can be easily disposed of. The insulation which prevents the rapid radiation of heat from the cooking compartment will prevent its entrance just as effectively and the temperature will remain below that of the surrounding air long after the ice has melted.

W. B. M., Newburgh, N. Y.

Ballast for a Cranky Boat

(Continued from page 38)

man. Therefore, we will avoid all technicalities as to why the boat is cranky and the method of correcting the fault. The quick sharp and very uncomfortable roll has not been definitely proven to be dangerous so long as it does not go beyond certain limits, but such a boat is decidedly uncomfortable to be aboard when there is a sea on. The slow easy roll is much more comfortable within its limits.

The shape of the hull and the location and distribution of the weights has practically all to do with the manner and extent of the rolling. Aside from altering the hull and reconstructing the joiner work ballasting is the only means of improving the action of the boat. Where expense is a consideration, precast concrete is the most suitable material for ballasting, and the concrete should be waterproofed by the integral method to insure it against cracking in freezing weather. Wooden moulds, smooth on the inside and tapered so that the blocks can be easily removed after the cement has set, make the best forms. Monolithic concrete has the advantage of not shifting under any conditions but it has many other disadvantages, among them being the inability to make changes.

(Continued on page 86)

LIGHT WEIGHT

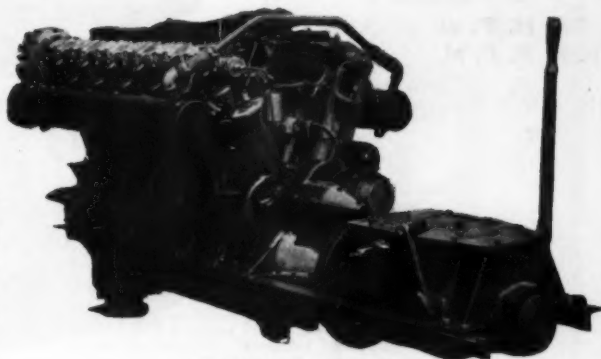
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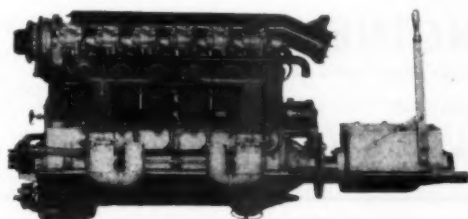
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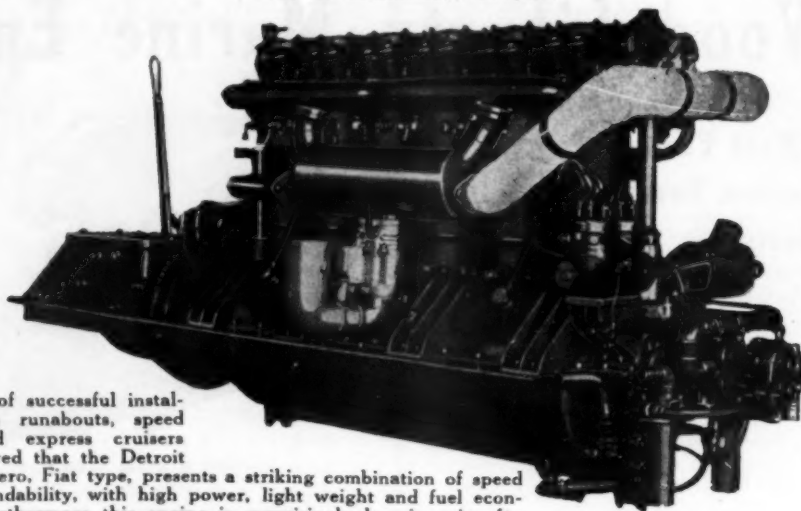
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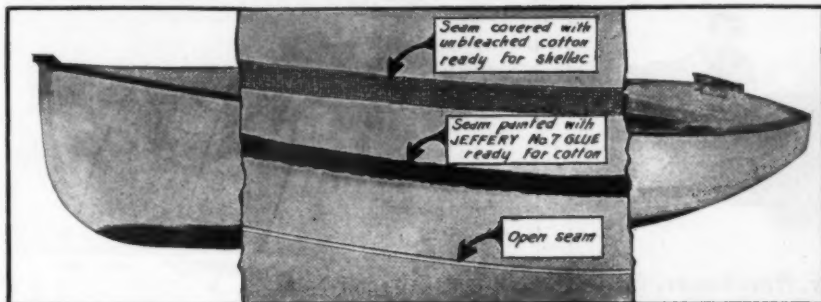
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MARINE GLUES

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The lower seam is shown open, as usually is the case when a boat is laid up during the winter, the middle seam is shown painted with a coat of our Jeffery's No. 7 Marine Glue ready for the cotton fabric which is laid on the glue and ironed into it with a warm flat iron as shown on the top seam. The cotton is then given a coat of shellac and painted. When the job is completed according to these directions the patching strips can scarcely be detected. We however believe and earnestly recommend that if a more permanent result is desired, the entire surface be covered with a fabric, laid in our Jeffery's No. 7 Black soft quality Marine Glue. This treatment will insure a boat with a coat of paint once a year being absolutely watertight indefinitely.

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(See our ad on Page 140)

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The First "Everybody's Motor Boat"

**Raised Deck
Cruiser Com-
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for Cruise—**

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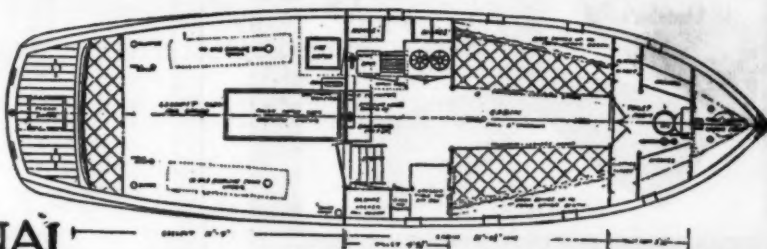
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THE BLACK DIAMOND wins 610 and 725 Classes at New Orleans

FINISHED WITH THE OLD HARD FOSSILE GUM PRODUCTS

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It is the HARD FOSSIL GUMS in these products which cause them to stand up under the terrific friction of water on speed-boats and against the pounding of the salt waves on seafaring vessels.

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"The Salt-Water-Proof Lacquer" prevents tarnish and rust on brass, silver, steel and all bright metal work.

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THE NEWEST RED BANK STANDARDIZED SMALL CRUISER

Length 30'

Beam 8' 6"

Draft 2' 2"

50 H. P.
Speed 12 M. P. H.
\$4800.00

200 H. P.
Speed 28 M. P. H.
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Complete Hull
\$4000.00
Fully Equipped



Large Protected
Cockpit

Roomy Cabin

Engine not in
Cabin

Wonderful
Seaworthiness

All conveniences

Combines all the advantages of a fast runabout with the protection and accommodations of a cruiser. Easy to handle and economical to run, it is ideal for fishing and all general use.

White cedar planking, copper fastened throughout. Oak frames. Mahogany trim. Construction and finish follows the best standards.

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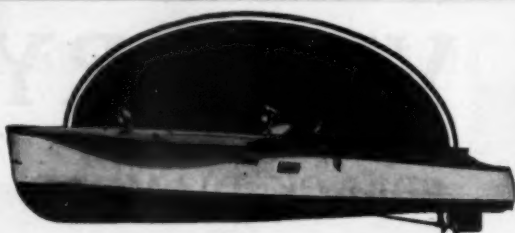
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Out under the blue sky—Out where the air is pure, and has the snap that gives a healthy color, and where cares and worries are wiped away.

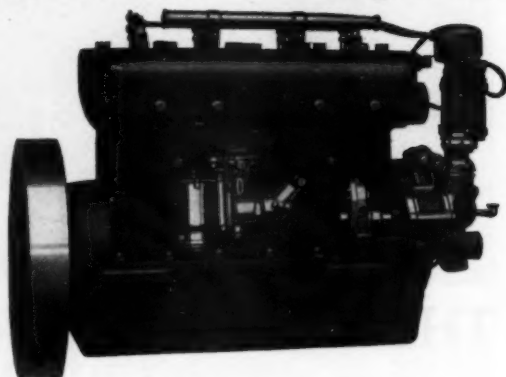
A RacineWis Runabout—speedy, comfortable and easy to handle—is the answer. Built to your specifications with individual ideas that make your Motor Boat stand out from the rest. Three sizes—19', 22½' and 25'.

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Racine Boat Company
Dept. A, Racine, Wis.

\$179.00 Complete



A Good Engine Backed by Over 20 Years of Experience

A four cylinder four cycle marine engine with 3¼" bore and 4" stroke. Extreme simplicity, absolute standardization of parts and our policy of selling for cash enables us to supply this new Roberts model "J" at \$179.00, completely equipped as shown. The lowest price quoted for any marine engine of its type.

All moving parts are interchangeable with standard Ford motor parts, obtainable throughout the world.

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"The Wood Eternal"

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"All-heart, sure enough TIDE-
WATER" is the kind of Cypress to
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TIDEWATER CYPRESS, "the Wood Eternal," is
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should be the best obtainable. For seventy years
Ritchie compasses have been the choice of ex-
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the one best suited for your
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EVERYTHING FOR THE PER-
SON OF THE YACHTS-
MAN, HIS OFFICERS
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Clubs, yacht owners, commercial boat
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Builders of high quality standardized cruisers 33-36-
40-45-50-55 and 62 feet in length.

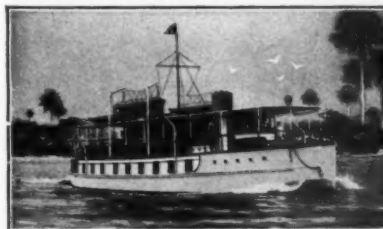
ROCHESTER BOAT WORKS, INC.
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65-Foot Emeska
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Our interest in you and your houseboat does not end with the delivery of a

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It increases year after year—as we note that our boats are the center of interest every Florida season—are among the leaders wherever finest boats are found—are in such great demand for charter.

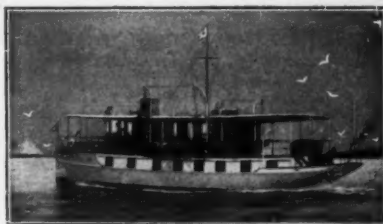
Mathis superiority of workmanship is shown by the high re-sale price of Mathis-built houseboats—at times exceeding the original purchase price.

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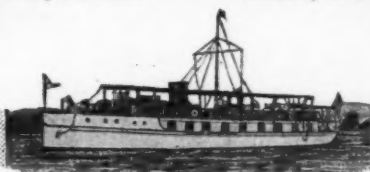
Camden, N. J.



70-Foot Bilma III
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79-Foot Ebenezer
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HOUSE BOATS

AND YACHTS

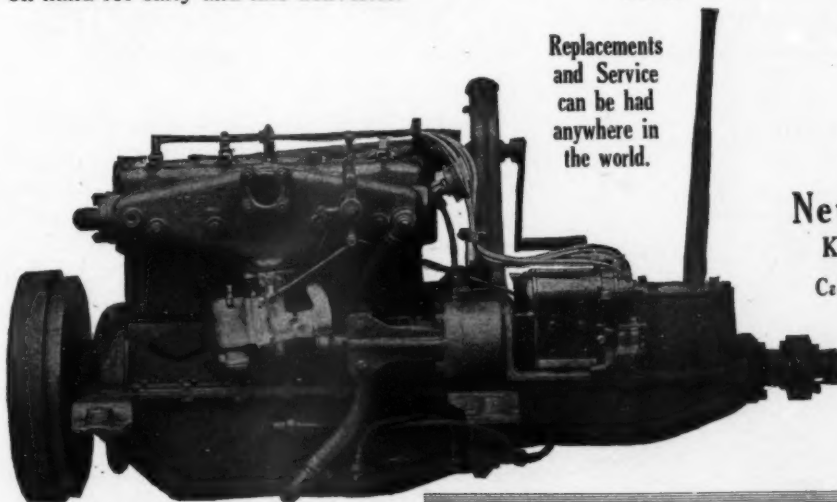
Prompt Deliveries Guaranteed on N. J. M. MOTORS



If you order an N.J.M. you can be sure of immediate delivery because we have plenty of them in stock and can ship on 24 hours notice. It has always been our policy to run our plant full time right through the winter to keep an adequate stock on hand for early and late deliveries.

When you learn what a wonderful little marine motor the N.J.M. really is you would even be willing to wait for one if necessary—but it isn't necessary. Furthermore our new **EASY PAYMENT PLAN** enables you to use your motor while you are paying for it.

Replacements
and Service
can be had
anywhere in
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Price \$440

fully equipped including
front or rear starter

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Keyport, New Jersey, U. S. A.

Cable Address: "Nujermo," Keyport

This cut shows the N. J. M. Motor with Safety Rear Hand Starter. Also supplied with Safety Front Hand Starter for use in a cabin cruiser or auxiliary sloop, where the flywheel is half under the floor and the rear end of the motor is under the companionway.

There is no extra charge over the rear starter for this new type front starter.

23 YEARS OF FAITHFUL SERVICE

The best salesmen we have working for us are the hundreds of Regal Engines we have produced during the past 23 years.

They are quiet, hard working salesmen, always on the job, always setting an example of Regal Reliability that is more convincing than any spoken word or printed salesmanship.

There are 17 sizes in the Regal line, from a 2 H. P. single cylinder to 100 H. P. eight cylinder. All four cycle type, low in price for their quality and reliability.

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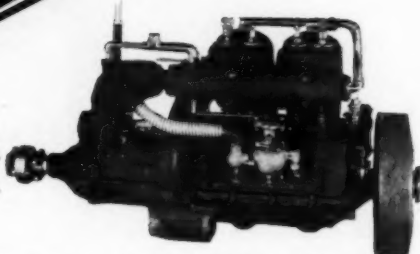
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Latest Regal Model

2 Cylinder 8-H.P. Model N.B.

Bore 4 in. Stroke 4 1/2

Price \$418. With Bosch Magneto, \$450.



We also build the Regalite, a complete electric plant for yachts and homes.

Write today for latest catalog and prices.

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Cruise This Summer in a "STANDARDETTE"

IF you want to find the most complete enjoyment in motor boating, get a good reliable cruiser that is big enough for several persons to live aboard without crowding. Our 38 ft. "STANDARDETTE" sleeps six comfortably, and has large galley and toilet with enormous locker space.

Handsome lines, beautifully finished,—a roomy, comfortable, dependable boat.

Speed 11 miles with Kermath 35—more speed with larger motor. Electric starter and lights.

Let us send you complete specifications

\$6750



"Star Class" Sloops

Let us quote you our price on one of these popular racing boats, the most famous one-design class for club racing. Built to official specifications of the Star Class Racing Association.

Length overall, 22' 6"

Length water line, 15' 6"

Beam, 5' 9". Draft, 3' 4"

We are now building one for Mr. Henry T. Hornidge of the Larchmont Yacht Club. Come up and see it.

14 ft. Sailboat, \$250 Complete

A Marconi-rig centerboard skiff, mahogany planked and copper fastened on oak frames. The ideal sailboat for fun this summer on inland lakes or at seaside resorts. Also sold for rowboat or tender without mast or sail but including oars and oar locks, \$175.

Write for specifications and next delivery dates. If you live near N. Y. come and see these boats.

T. A. KYLE CO., INC.

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Proof that the right power Plant for YOUR boat is the

BRENNAN

STANDARD

regardless of size or type, whether used for pleasure, fishing or commercial service.

BRENNAN Standard Motors are known from coast to coast and have been the acknowledged leaders in the marine field for more than a generation. Our line is the most complete offered by any marine engine manufacturer, ranging in sizes from 17 to 100 H.P., is furnished complete in every detail—no extras required.

Extracts from a
Few Recent Letters



35% x 9% cruiser owned by J. A. Coward, powered with M-4 17-20 H.P. motor, speed 10 m.p.h.

Gentlemen: With reference to the model M, 17-20 H.P. motor which I purchased from you last March. We have given this motor some long, hard runs, such as fourteen day trips at a time, and have never had to touch the motor, all that was necessary was to push the button and the motor started.

We have also used this motor for our blue and codfishing in the Atlantic Ocean in very rough weather, and the motor never missed once.

For example, we have taken runs to Fire Island and back by the way of Great South Bay, a distance of about sixty miles, and we never looked at the motor on the entire trip.

Yours truly,
(Signed) J. A. Coward.

Since writing the above letter, Mr. Coward has purchased one of our D-4 motors.

"The motor runs fine, and we could not wish for a better running power plant."

W. C. Blackburn.

"Very much pleased with the performance of the Model M-4 Motor installed last June. It is a very quiet motor, powerful and above all, FREE FROM VIBRATION, which is a wonderful asset in a marine motor."

H. W. Henry.

COUPON

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Just say "Send me your new sales plan and advance catalog. My requirements are
Boat Builder { }
Boat Owner { }
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Name
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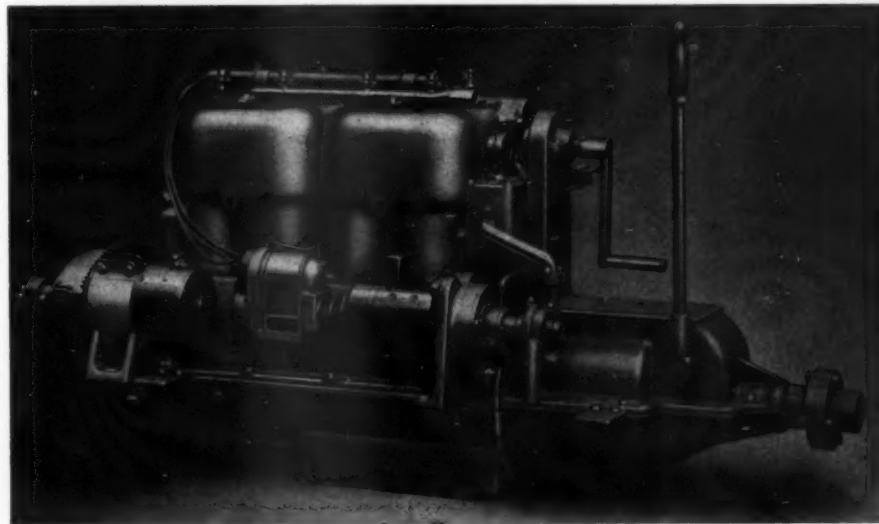
BEFORE YOU BUY—WRITE BRENNAN

A few of the many unusually good and exclusive Brennan features are: an oil cooler and filtering device, a method of preheating the cooling water before entering the cylinders, a hot-spotted manifold construction, a two unit Bosch electric starting equipment, an emergency rear starter, reverse gear having reverse speed the same as the forward, high pressure lubricating system thru a hollow crank shaft.

Designed for double ignition—Bosch high tension magneto or Atwater Kent—both systems furnished when desired at a slight additional cost.

Valve mechanism completely enclosed. There are four hand hole plates—two on a side. Bearings, 2½" in diameter.

Below is our New Model D-4 Medium Duty 25-35 H.P.



BRENNAN MOTOR MFG. CO.

500 E. WATER STREET.

SYRACUSE, N. Y.

Cable address "Binot"

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Sea Sled at High Speed
Painted with Marblehead Green.

"Concerning your MARBLEHEAD GREEN PAINT for the bottoms of Sea Sleds, we have no hesitancy in giving it our highest recommendation." The Sea Sled Co., Ltd.

THE BERMUDA AND HALIFAX RACERS

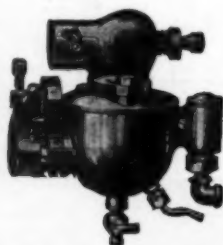
are many of them painted with MARBLEHEAD GREEN, among which are the "Malabar V", "Ladona", "Hathor", "Northern Light", "Rival II" and many others.

USED AND HIGHLY RECOMMENDED FOR 20 YEARS BY J. MURRAY WATTS on large cruising yachts, such as the 110 ft. "Robadar III", the 99 ft. "Glinockie", the 87 ft. "Kiva" and many others, GEORGE LAWLEY & SON, CORPORATION have used MARBLEHEAD GREEN for years and give their highest recommendations: and it is used on thousands of the FINEST AND FASTEST RACING YACHTS AND VESSELS.

MERCHANT VESSELS have adopted its use to a considerable extent on account of LONG LIFE AND ECONOMY. It is the most

POWERFUL ANTI-FOULER AND PREVENTIVE OF MARINE GROWTH. Cannot be EQUALED IN TROPICAL AND SEMI-TROPICAL WATERS where it is practically necessary as a protection against the DESTRUCTIVE TERREDO.

ALL PUT UP DOUBLE STRENGTH
STEARN'S-McKAY MFG. CO., Marblehead, Mass.
All first class Dealers, Ship and Yacht Yards.
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The Schebler Model D Carburetor

is a favorite for work boat engines not requiring extreme throttling conditions. Simple in adjustment, it is very reliable under extremely hard service conditions.

SCHEBLER
The World's
Finest CARBURETORS
THE WHEELER-SCHEBLER CARBURETOR CO. INDIANAPOLIS, U.S.A.

Ballast for a Cranky Boat

(Continued from page 76)

A1-2-3 mixture (1 part Portland Cement—2 parts clean sharp sand—3 parts crushed stone) is recommended for ballast. The waterproofing compound can be supplied by any building supply dealer. It is a powder to be mixed with the cement in definite proportions and its action is to fill the space between the particles of cement. If stone is not used, do not increase the proportion of sand. Tamp well along the edges with a spade or sharp edged wooden paddle to work the stone away from the sides, and trowel the top smooth. Concrete weighs about 120 lbs. per cu. ft.

Before working on the boat, perform this simple experiment to demonstrate the action of the boat in rolling. Make a cardboard model of the amidship section of the boat about a foot in diameter. By means of a brad, tack the model to the edge of a table, in a vertical position so that it is free to revolve. To the lower part of the model tack a block of wood or lead weighing from one to two pounds. Move the model so that the weight is at an angle approximating the angle of roll of the boat and let go, noting the speed with which the model rolls and the time required for it to come to rest. Now, divide the weight into two equal parts and attach the halves to the edge of the model in a position approximately where ballast could be placed in the boat, or 60 degrees apart. Move the model the same distance as before and let go. You will find that the model rolls more slowly and comes to rest more quickly than before. You can arrange a proportion that may be an aid in ballasting but there are other factors entering into the actual ballasting of the boat which are not taken into account in the experiment. However, it does prove that ballast is more efficient in preventing a sharp quick roll when divided and placed away from the keel.

The amount of ballast can be calculated, but not by the average boat owner. By experiment is the most satisfactory means of determining the amount and location of the ballast. Load the hull, mostly aft of amidships, that she may lift easily in a head sea, in proportions as determined from the cardboard model. Anything heavy will answer. Test by bearing over to the side and then releasing. When you have accomplished satisfactory results, remove and weigh the weights and so proportion the size and number of concrete blocks that you will get the same weight and distribution of weights. For easy handling set a 3/4-inch diameter round iron handle in each section before the concrete sets. A stout oak stick placed through these handles and secured at each end will prevent shifting of the ballast.

W. B. M., Newburgh, N. Y.

Johnson Twins Go by Carloads

Even though the outboard motor season has hardly begun, the Johnson Motor Company of South Bend, Indiana, is making record breaking shipments of Outboard Motors. The factory has been working night and day since January and at this date approximately four times as many motors have been sold as had been sold at the same time last year.

Up to this time production in the plant has met the demands for immediate delivery, but with the unprecedented call for the Lightweight Johnson Twin ahead of the season it is already becoming apparent that there will be more people wanting Johnson Motors in 1924 than can possibly obtain them.

SPECIAL CLEARANCE



Brand new Dome Lights, nickel plated, four-inch over all, frosted lens complete with 2 or 4 C. P. double contact, 6 volt bulb. Can be screwed to cabin sides or ceiling. Price \$1.00 each, \$10.00 dozen. Discount to the trade on substantial quantities.

Celebrated Mosler Vesuvius Mica Spark Plugs \$1.50 and \$2.00 grades, 3/4" standard, 1/2" long, 1/4" standard, 1/8" long. Price 50c each. Discount on lots of 100.

Electric starters, generators, starter switches, ammeters, magnetos, etc. at less than original manufacturing cost. All goods guaranteed brand new and in perfect condition.

GENERAL SALES CO.

1919 South Michigan Ave.

Chicago, Ill.

The Big 5 Reasons WHY

You, too, will want an Elto

Ole Evinrude's
3 H.P. *Fast*
LIGHT TWIN

*Instant
Easy
Starting*

*Safe
Rudder
Steering*

*50%
More
Power*

*Much
More
Speed*

*The
Propello
Pump*

The Elto "starts with a touch." Just get into your boat and go—as easy as stepping on the self-starter of your auto. No other Motor starts so easily, because no other has Atwater-Kent Uni-Sparker Ignition and Columbia Hot-Shot Waterproof Batteries. No hard, stubborn starting. No cranking. No spinning. No awkward rope pulling.

You drive from any part of the boat. You have both hands free to cast or troll. You have no fear of a sudden reversal of the Motor, endangering the boat passengers. Women and children are always safe with Elto. You never lose control of the boat, even in rough seas. The broad fin-shape rudder turns boat quickly, or holds the course straight as an arrow. Gives you perfect landing control after Motor is shut off. Motor self-tilts when passing over submerged logs or obstacles.

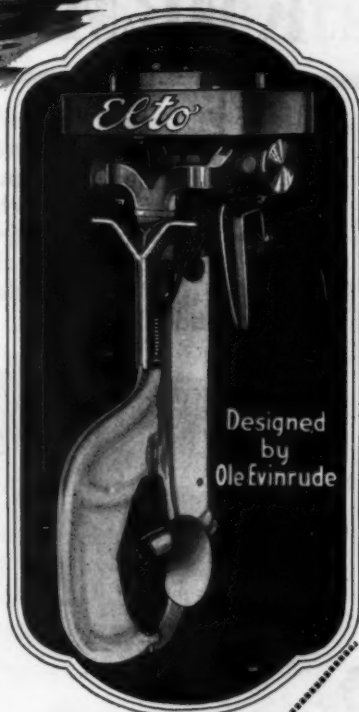
Every time you use your Elto, this great advantage grows. You see Motors of less power struggling under the load.

You see their owners crowding, coaxing, squeezing for more power—while you turn loose your Elto's full 3 H. P. and enjoy its easy purr—its absolute mastery of both load and sea.

When you are impatient to get out where the fish bite best, or when you have overstayed your time on the lake, you want *speed*—all you can get. That's when you are thankful you chose an Elto.

No other Outboard Motor will move your boat across the water so swiftly. No other can keep the pace you set. If a challenge comes to your racing blood, meet it with confidence. Your Elto will not disappoint you.

Here is the crowning achievement of Ole Evinrude—founder of the industry. In the 1924 model, he has removed the last annoyance in Outboard Motor use. Pump troubles are ended. His Propello Pump (found only in Elto) utilizes propeller pressure to keep the water circulating. There is not one single moving part. No valves to stick. No parts to wear. No pump to clog. No danger of overheating Motor; even in muddy, sandy or salt waters.



Designed
by
Ole Evinrude

Do not confuse the Easy-Starting Light-Weight Elto Twin with any other Outboard Motor, as for 10 years, Ole Evinrude, founder of the industry, has had no connection with any other Outboard Motor Company. The Elto is built in his own factory, under his personal direction.

(13)

ELTO OUTBOARD MOTOR CO.,
Dept. F, Manufacturers' Home Bldg., Milwaukee, Wis.
Gentlemen: Send me complete catalog describing the 1924 Elto Outboard Motor.

Name.....

Address.....

These are the reasons why you, too, will want an Elto. A demonstration and comparison in actual water use will quickly convince you.

ELTO OUTBOARD MOTOR CO., OLE EVINRUDE,
Dept. F, Manufacturers' Home Bldg., Milwaukee, Wis. "President"

Write for Free Catalog

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"Agnes" a 35 ft. Florida fishing boat owned by Capt. James B. Vreeland of Fort Lauderdale, Fla., used for game fishing in the open ocean. A Kermath 50 gives Agnes an easy cruising speed of 15 miles per hour.

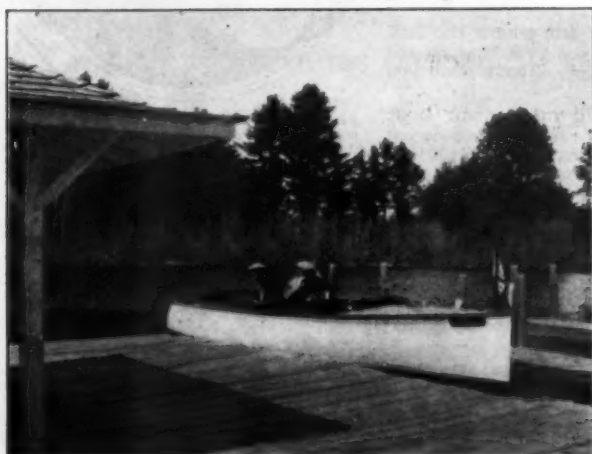
KERMATH Powered Boats

WE are proud of the confidence which the boating public has learned to place in KERMATH Engines. Imagine our satisfaction in selling an engine to a man who has owned one, or perhaps several Kermaths, in the past; or to a boat builder who has installed a Kermath whenever the selection of an engine was left to him.

Boating isn't much fun if you lack confidence in the dependability of your engine. When you decide on a Kermath you are confident that you will have a dependable boat.



This mahogany runabout is a 25' x 5' 4" Hand V-bottom, built by Hyde Brothers of Schenectady, N. Y. for Dr. H. A. Staley of Schenectady, for use on Lake George. A Kermath 50 drives it 25 miles an hour.



A typical Maine fishing boat built by Clifton M. Rich, Bernard, Me., for Mr. E. M. Davenport of Boston. This boat is 26' x 7' x 2' 6" and is powered with a Kermath 20.

At the left is another Maine fishing boat, built by R. L. Stewart, Belgrade Lakes, Me. It is 23' x 5' and makes 14 miles an hour with a Kermath 16.



"Adolfo" is another Florida fishing cruiser designed and built by Angelo Santini of West Palm Beach, Fla. This boat is 35' x 9' 6" and does 15 miles an hour with a Kermath 50.

Are Always Dependable Boats

Let us help you get in touch with a builder who can produce the type of boat you are looking for. It will be a pleasure to tell you more about Kermath Engines and the types of boats in which they are used.

KERMATH MFG. CO.,
5879 Commonwealth Ave. DETROIT, MICH.

The Bystrom Boat Works, Tower, Minn. built this attractive runabout for Mr. Tom Hewett who uses it on Lake Vermilion, Minn. It is a 26' x 6' V-bottom and is driven 16 miles per hour by a 16-20 H.P. Kermath.



This 23' x 5' V-bottom mahogany runabout makes 28 miles an hour with a Kermath 20. It is owned by R. J. George of New York and was built by Geo. I. Gilbert.



Preston F. Clark, Harpswell Center, Me., built this 26' x 7' runabout for A. L. Colesworthy of Portland. It has a Kermath 35 and is the third Kermath owned by Mr. Colesworthy. Preston Clark built him his first Kermath powered boat 17 years ago.



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LAKE MICHIGAN SEA SKIFF

24' x 7'



\$1750.00 fully equipped
20 Miles per Hour

THE most popular type of open boat on the market today because it combines the highest degree of seaworthiness with speed, dryness, strength, light weight and economy. You can ride out any weather on the Great Lakes or open ocean in one of these skiffs. Simply can't drown them.

For Fishing, Work or General Runabout Service

Ideal for fishing because it is fast enough to take you where the fishing is best, will throttle down to trolling speed when you get there, and is always ready for a quick trip home.

Handsome enough and quiet enough for the yacht club, regatta and summer colony. Sturdy enough for work and general runabout or ferry service.

SCRIPPS F-4 With Electric Starter

This high grade power plant insures the reliability that you want in such an able boat.

We have a few for July delivery

On Lake Michigan. Can drive them away or ship anywhere

WHITE LAKE BOAT COMPANY

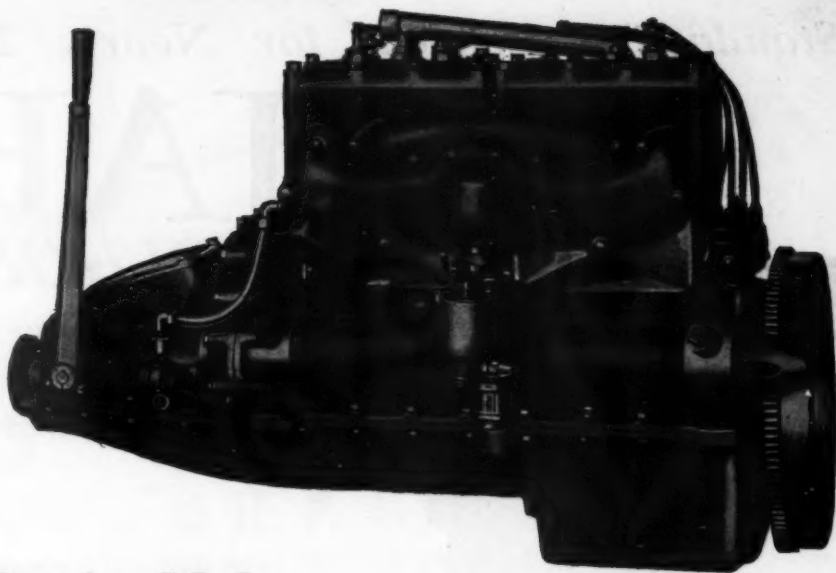
MONTAGUE, MICH.



"The motor that crossed
the Atlantic"

MODEL F-4**\$750.00**

Complete with
Electric Starter
15-40 H. P.
Medium Duty
40-60 H. P.
High Speed
Weight 550 lbs.
Length 44".



They Just Don't Make Them Any Better

Judged by the very highest automotive and marine engine standards, it is difficult to find opportunities for improvement in the 1924 SCRIPPS motor.

Better materials cannot be had—the craftsmanship is the most exacting—the design, the latest approved practice to insure maximum service under all operating conditions.

The SCRIPPS engine is a finished product so accepted by the entire industry—architects, boat builders and motor manufacturers alike.

In fact, in point of real effective design it will be found far in advance—particularly in power, economy and measures to cope with the ever lowering quality in motor fuels.

After a critical survey of all makes exhibited at the National Show, an internationally famous automotive engineer conceded proper design in carburetion and manifolding to only two lines, the SCRIPPS and another make selling at a much higher price.

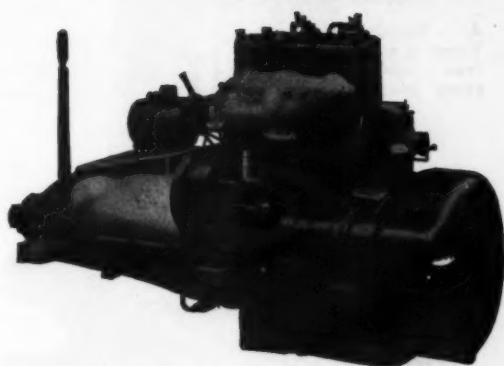
Its very excellence often creates the false impression of high price, whereas a SCRIPPS is really the cheapest engine one can buy, power, service, equipment, operation, maintenance and satisfaction considered.

Sizes for almost every type of hull or service with opposite rotation in the larger units for twin screw installation.

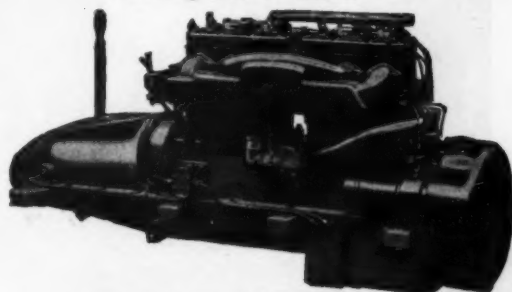
Immediate delivery for late season buyers.

SCRIPPS MOTOR COMPANY
5819 Lincoln Avenue Detroit, Michigan

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D-2 10-12 H.P. Medium Duty
15-18 H.P. High Speed
Including Electric Starter **\$650**



E-4 30-45 H.P. Medium Duty
45-70 H.P. High Speed
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65-100 H.P. High Speed
Including Electric Starter **\$1750**

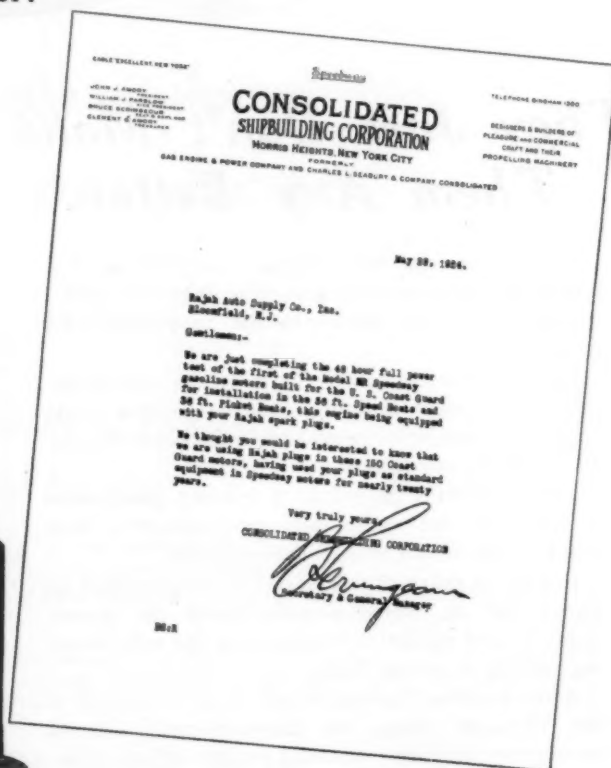
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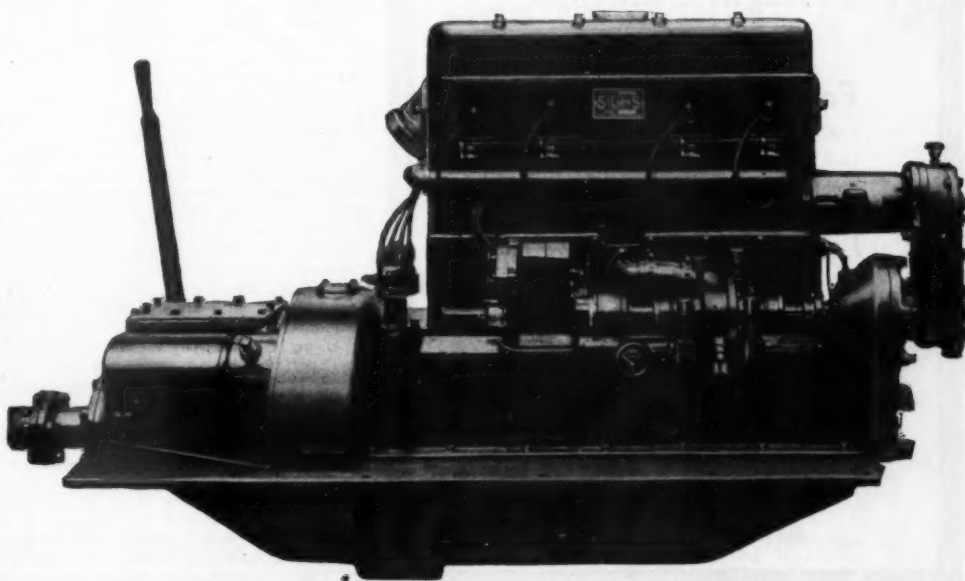
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The Robinson Crusoe Syndicate

(Continued from page 18)



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ring he's in Scraggsy's class." (Here Mr. McGuffey flashed a lightning wink to the commodore. It was an appeal for Mr. Gibney's moral support in the engineer's scheme to put up a job on Captain Scraggs, and thus relieve the tedium of the homeward trip. Mr. Gibney instantly telegraphed his approbation, and McGuffey continued.) "I notice also that if I was to hunt the universe over, I couldn't find a better match for Gib than Tabu-Tabu. And as we are all agreed that the white race is superior to any race on earth, and it'll do us all good to see a fine mill before we leave the country, I move you, gentlemen of the syndicate, that we pull off a finish fight between Scraggsy and the king, and Gib and Tabu-Tabu. I'll referee both contests and at the conclusion of the mixup we'll leave these two murderers marooned on the island and then——"

"Rats," snapped Captain Scraggs. "That ain't no business at all. You shouldn't consider nothin' short of capital punishment. Why, that's only a petty larceny form of——"

"Quit buttin' in on my prerogatives," roared McGuffey. "That ain't the finish by no means."

"What is the finish, then?"

"Why, these two cannibals, bein' left alone on the desert island, naturally bumps up agin the old question of the survival of the fittest. They get scrappin' among themselves, and one eats the other up."

"By the toe-nails of Moses," muttered Mr. Gibney in genuine admiration, "but you *have* got an imagination after all, Mac. The point is well taken and the programme will go through as outlined. Scraggs, you'll fight the king. No buckin' and grumblin'. You'll fight the king. You're outvoted two to one, the thing's been done regular, and you can't kick. I'll fight Tabu-Tabu, so you see you're not gettin' any the worst of it. We'll proceed to an island in the Friendly Group called Tuvana-tholo. It lies right in our homeward course, and there ain't enough grub on the confounded island to last two men a week. And I know there ain't no water there. So, now that that matter is all settled, we will proceed to heave the anchor and scoot for home. Mac, tune up your engines and we'll get out of here a-whooping' and a-flyin'."

Ten minutes later the anchor was hanging at the hawsepipe, and under her power the Maggie II swung slowly in the lagoon, pointed her sharp bow for the opening in the reef, and bounded away for the open sea. Captain Scraggs jammed on all of her lower sails and within two hours the island of Kandavu had faded forever from their vision.

It was an eight-hundred-mile run up to Tuvana-tholo, but the weather held good and the trade-winds never slackened. Ten days from the date of leaving Kandavu they hove to off the island. It was a long, low, sandy atoll, with a few coconut-palms growing in the centre of it, and with the exception of a vast colony of seabirds that apparently made it their headquarters, the island was devoid of life.

The bloodthirsty McGuffey stood at the break of the poop, and as he gazed shoreward he chuckled and rubbed his hands together.

"Great, great," he murmured. "I couldn't have gotten a better island if I'd had one built to order." He called aft to the navigating officer: "Scraggsy, there's the ring. Nothin' else to do now but get the contestants into it. Along in the late afternoon, when the heat of the day is over, we'll go ashore and pull off the fight. And, by George, Scraggs, if that old king succeeds in lambastin' you, I'll set the rascal free."

"I'll lick him with one hand tied and the other paralyzed," retorted Captain Scraggs with fine nonchalance. "No need o' waitin' on my account. Heat or no heat, I'm just naturally pinin' to beat up the royal person."

"If this ain't the best idea I ever heard of, I'm a Dutchman," replied McGuffey. "A happy combination of business and pleasure. Who fights first, Gib? You or Scraggs?"

"I guess I'd better open the festivities," said Mr. Gibney amiably. "I ain't no kill-joy and I want Scraggsy to get some fun out of this frolic. If I fight first the old kiddo can look on in peace and enjoy the sight, and if him and the king fights first perhaps he won't be in no condition to appreciate the spectacle that me and Tabu-Tabu puts up."

"That's logic," assented McGuffey solemnly; "that's logic."

Seeing that there was no escape, Captain Scraggs decided to bluff the matter through. "Let's go ashore and have it over with," he said carelessly. "I'm a man of peace, but when there's fightin' to be done, I say go to it and no tomfoolery."

Mr. Gibney winked slyly at McGuffey. They each knew Scraggs little relished the prospect before him, though to do him justice he was mean enough to fight and fight well, if he thought he had half a chance to get the decision. But he knew the king was as hard as tacks, and was more than his match in

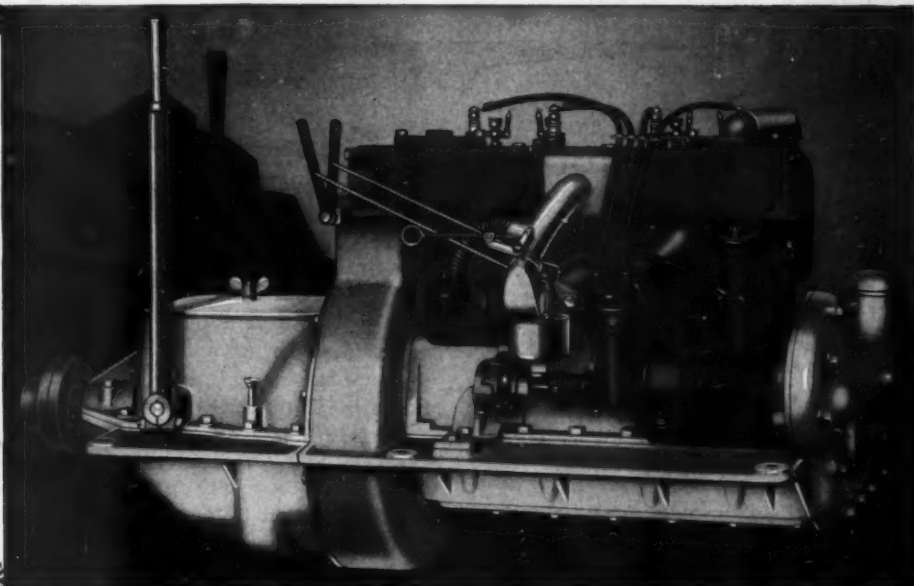
(Continued on page 98)

Gray Motors

\$395

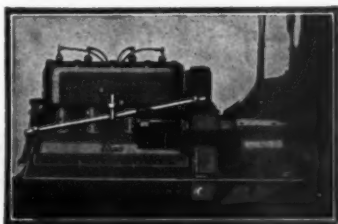
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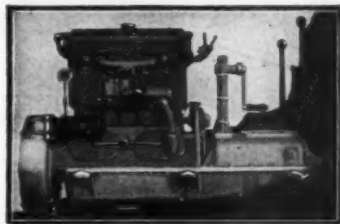


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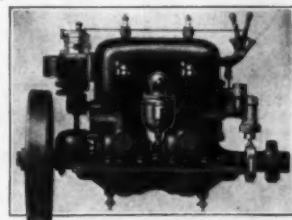
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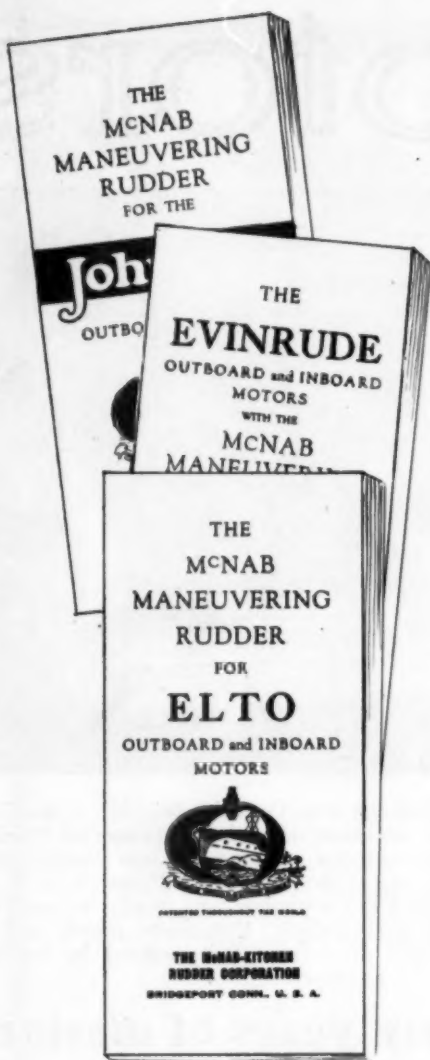
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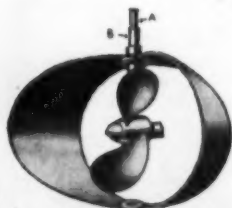


FIG. 1
SHOWING RUDDERS
IN PERSPECTIVE

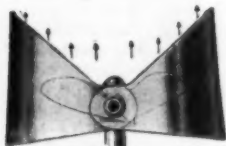


FIG. 2
FULL SPEED AHEAD

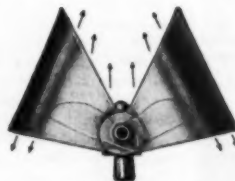


FIG. 3
HALF SPEED AHEAD

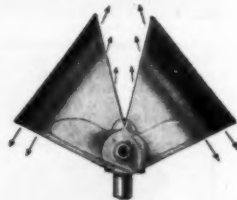


FIG. 4
NEUTRAL POSITION
BOAT STATIONARY

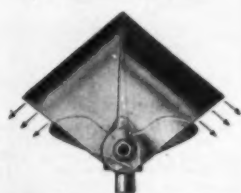


FIG. 5
FULL SPEED ASTERN,
WITH PROPELLER
RUNNING AHEAD

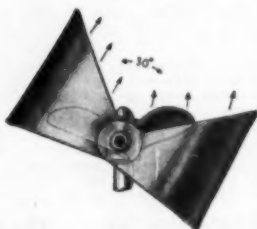


FIG. 6
HARD OVER, BOW TO
PORT

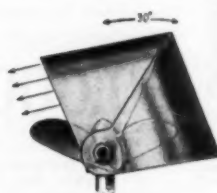


FIG. 7
RUDDERS CLOSED,
HARD OVER, BOAT
SPINNING ON OWN
CENTER

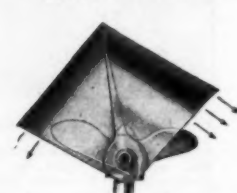


FIG. 8
ASTERN-BOW TO PORT
OR VICE-VERSA ..

Advertising Index will be found on page 139

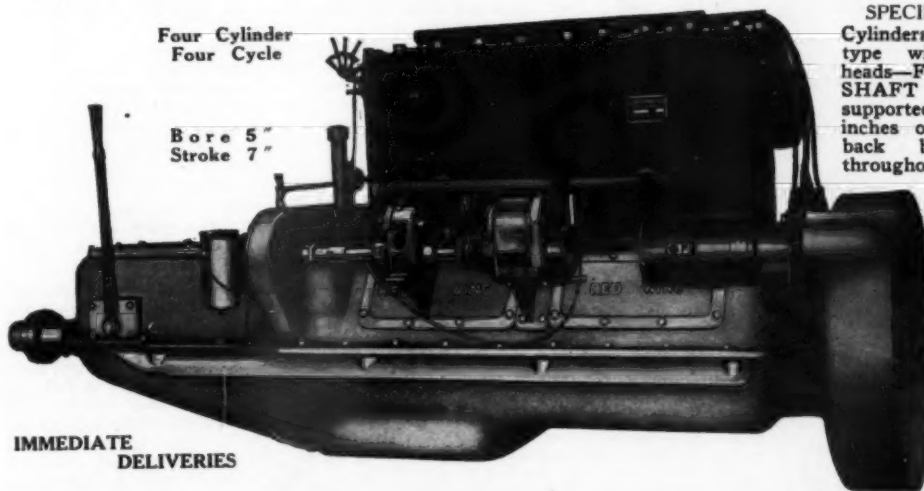


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The Robinson Crusoe Syndicate

(Continued from page 94)

a rough and tumble, and while he spoke gravely enough, his words did not deceive his shipmates, and inwardly they shook with laughter.

"Clear away the big whaleboat with two men to pull us ashore," said Mr. Gibney to the mate. Five minutes later the members of the syndicate, accompanied by the captives, climbed into the whaleboat and shoved off, leaving the Maggie II in charge of the mate. "We'll be back in half an hour," called the commodore, as they rowed away from the schooner. "Just ratch back and forth and keep heavin' the lead."

They negotiated the fringe of breakers to the north of the island successfully, pulled the boat up on the beach, and proceeded at once to business. Mr. Gibney explained to Tabu-Tabu what was expected of him, and Tabu-Tabu in turn explained to the king. It was not the habit of white men, so Mr. Gibney explained, to kill their prisoners in cold blood, and he had decided to give them an opportunity to fight their way out of a sad predicament with their naked fists. If they won, they would be taken back aboard the schooner and later dropped at some inhabited island. If they lost, they must make their home for the future on Tuvana-tholo.

"Let 'er go," called McGuffey, and Mr. Gibney squared off and made a bear-like pass at Tabu-Tabu. To the amazement of all present Tabu-Tabu sprang lightly backward and avoided the blow. His footwork was excellent and McGuffey remarked as much to Captain Scraggs. But when Tabu-Tabu put up his hands after the most approved method of self-defense and dropped into a crouch, McGuffey could no longer contain himself.

"The beggar can fight, the beggar can fight," he croaked, wild with joy. "Scraggs, old man, this'll be a rare mill, I promise you. He's been aboard a British man-o'-war and learned how to box. Steady, Gib. Upper-cut him, upper—*woot!*"

Tabu-Tabu had stepped in and planted a mighty right in the centre of Mr. Gibney's physiognomy, following it up with a hard left to the commodore's ear. Mr. Gibney rocked a moment on his sturdy legs, stepped back out of range, dropped both hands, and stared at Tabu-Tabu.

"I do believe the nigger'll lick you, Gib," said McGuffey anxiously. "He's got a horrible reach and a mule kick in each mit. Close with him, or he's due for a full pardon."

"In a minute," said the commodore faintly. "He's so good I hate to hurt him. But I'll infight him to a finish."

Which Mr. Gibney forthwith proceeded to do. He rushed his opponent and clinched, though not until his right eye was in mourning and a stiff jolt in the short ribs had caused him to grunt in most ignoble fashion. But few men could withstand Mr. Gibney once he got to close quarters. Tabu-Tabu wrapped his long arms around the commodore and endeavored to smother his blows, but Mr. Gibney would not be denied. His great fist shot upward from the hip and connected with the cannibal's chin. Tabu-Tabu relaxed his hold, Mr. Gibney followed with left and right to the head in quick succession, and McGuffey was counting the fatal ten over the fallen warrior.

Mr. Gibney grinned rather foolishly, spat, and spoke to McGuffey, *sotto voce*: "By George, the joke ain't all on Scraggsy," he said. Then turning to Captain Scraggs: "Help yourself to the mustard, Scraggsy, old tarpot."

Captain Scraggs took off his hat, rolled up his sleeves, and made a dive for the royal presence. His majesty, lacking the scientific training of his prime minister, seized a handful of the Scraggs mane and tore at it cruelly. A well-directed kick in the shins, however, caused him to let go, and a moment later he was flying up the beach with the angry Scraggs in full cry after him. McGuffey headed the king off and rounded him up so Scraggs could get at him, and the latter at once "dug in" like a terrier. After five minutes of mauling and tearing Captain Scraggs was out of breath, so he let go and stood off a few feet to size up the situation. The wicked McGuffey was laughing immoderately, but to Scraggs it was no laughing matter. The fact of the matter was the king was dangerous and Scraggs had glutted himself with revenge.

"I don't want to beat an old man to death," he gasped finally. "I'll let the scoundrel go. He's had enough and he won't fight. Let's mosey along back to the schooner and leave them here to amuse themselves the best way they know how."

"Right-O," said Mr. Gibney, and turned to walk down the beach to the boat. A second later a hoarse scream of rage and terror broke from his lips.

"What's up?" cried McGuffey, the laughter dying out of his voice, for there was a hint of death in Mr. Gibney's cry.

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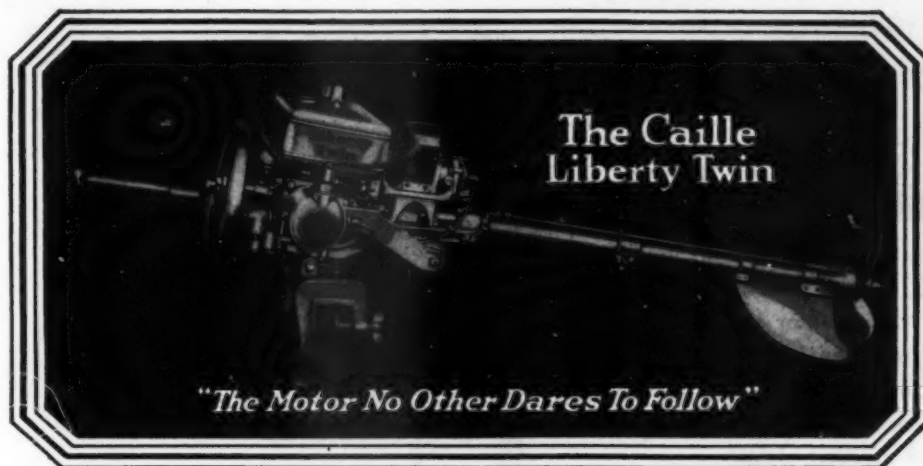


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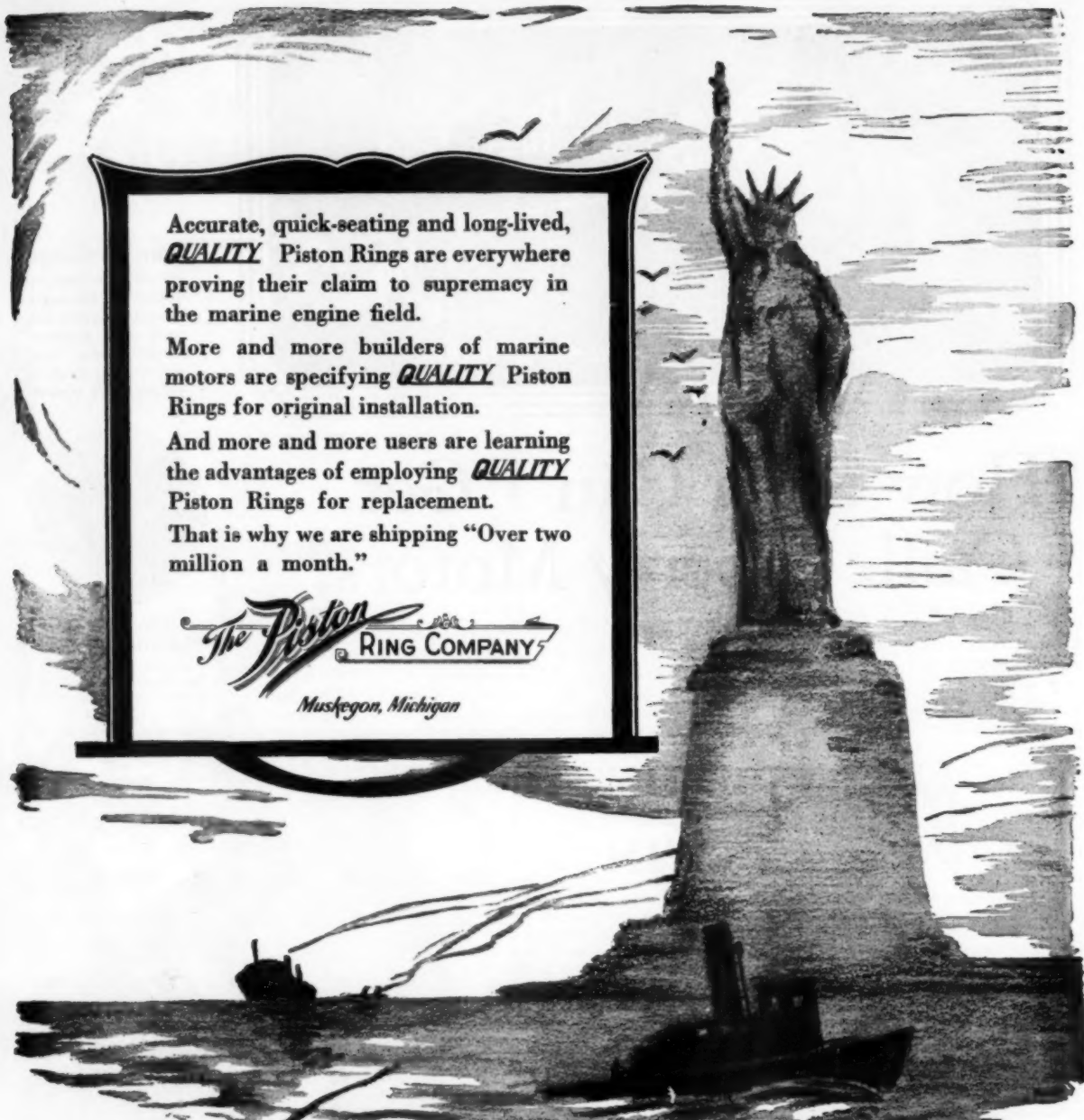
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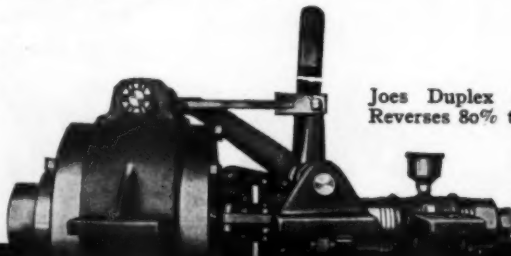
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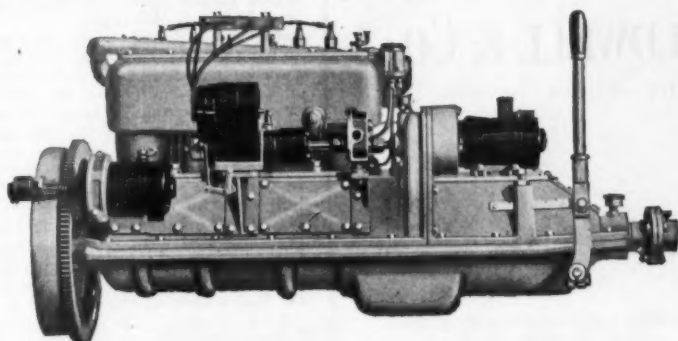
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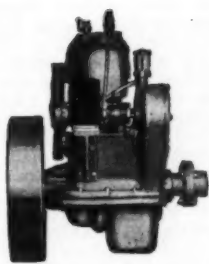
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How They Race Abroad

(Continued from page 30)

and a fourth class of touring cruisers, auxiliary motor yachts and boats of this kind.

Only two British boats were entered, several others building in south coast shipyards not being ready in time; but these two, both competing in the one and a half litre class more than made up in quality for the rest. The Ardenrun II, built by that fine sportsman, Captain Woolf Barnato in S. E. Saunderson's shipyard at Cowes off the Isle of Wight, was fitted with what was described as a Sunbeam motor, but what was really a Talbot-Darracq, the same engine which won the 200 mile race in this class last year at Monte Carlo. The other boat with a hull built by the Chester Boat Company for Gordon Bolton, was also equipped with a Talbot-Darracq engine, and had a great success in the 1923 meeting.

As usual Continental shipyards were well represented. The famous Italian constructors, the Baglietto shipyards from Varese had a boat in the one and a half litre class, two boats in the six to eight meter class—which pretty well ran away with things in this event—and one in the touring cruiser class. The Excelsior shipyards were able to send several boats down; but it was unfortunate that the Marquis de Casa Maury, one of the leading French racing enthusiasts was obliged to scratch his entry, Pierre de Lune, a Despujols product with a Bugatti engine, owing to the builder not having been able to complete the hull in time.

Each class ran three regular races; a short distance race of thirty kilometers (all distances were of course in kilometers, one kilometer equalling roughly five-eighths of a mile), a semi-long distance race of about fifty miles, and a speed sprint over a short course. The final event on the program was the Coupe de Cannes, in which only boats of the one and a half litre and the two cruiser classes were allowed to compete, which was run in two heats over a straight two kilometer course (mile and a quarter), the first kilometer from a standing and the second from a flying start. The final heat was between the winners of the two classes.

The six to eight meter class was dominated by two Italian boats equipped with Marini engines, the hulls constructed by the Baglietto shipyards. The third contestant, Excelsior XXV, with a Zurcher motor was outdistanced in all three races. The first event, the thirty kilometer race, was a great contest between the Italian speed boats, Baglietto XXII pulling away from her rival only in the last lap of the race and winning by exactly four seconds in 59 minutes, 24 and 3/5 seconds. The best speed for a single lap was made by this boat in 9 minutes, 5 and 3/5 seconds, an average of thirty-three kilometers (20 1/2 m.p.h.) an hour.

Baglietto XXII lost any chance of revenge in the hundred kilometer race by contracting engine trouble soon after the start; but defeated her rivals in the speed contest over a short course of ten kilometers in less than eighteen minutes. Meanwhile the racing cruiser class for boats from eight to twelve meters brought out some spirited clashes. All these boats were of French construction, equipped with Hispano-Suiza engines, except the Esperance, owned by Monsieur Misere, which was driven by a Mercedes engine.

The thirty kilometer race was an easy victory for Yzomona II, with a Picker hull, driven by her owner, Monsieur Marcel Jalla, who led the field from start to finish and ended four minutes ahead of Pacifou, which took second place. It was, however, the latter boat, with a speed of 62 kilometers an hour, that made the best lap for the day in four minutes and forty-five seconds. The hundred kilometer event was run on the only choppy day of the meeting, and accounts for the mediocre time of two hours and five minutes for the course. It was a real race, however, Yzomona, the eventual winner, being led most of the way by Pacifou, and also being passed at one stage by Esperance. Engine trouble on the part of the latter boat when she was neck and neck with Yzomona left Monsieur Jalla with but one boat to catch, which he succeeded in doing on the fourth lap holding his lead of a few seconds to the finish line.

The star class of the meeting was the litre and a half class, which attracted French, British, Italian and South American entries. The first race for this class was one of the most interesting of the entire ten days; the two British boats leaving the other contestants in the lurch and fighting it out for five laps with hardly more than a boat's length between them. From the start, Miss Emvire, with Mr. Bolton, the owner, at the wheel, took the lead, closely followed by Captain Barnato in Ardenrun II. The Italian Baglietto XXI led Dr. Etheorin's Sadi, but these two boats were passed by M. de Connick in his De Connick Vannon which eventually took third place. For the second, third, and fourth laps the Ardenrun hung on to Miss Emvire with true bulldog spirit, and at the beginning of the fourth made her try for the lead which brought her bow

(Continued on page 106)



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How They Race Abroad

(Continued from page 104)

even with that of her rival. The two boats were together for the best part of six hundred meters, when something in Ardenrun's engine gave way, and she was forced to drop out, leaving Miss Empire an easy victory in 33 minutes, 31 and a fifth seconds. She also made the best time for a single lap in 5 minutes, 26 4/5 seconds, or at an average speed of 55 kilometers an hour.

Captain Barnato's boat took the hundred kilometer test rather easily in 2 hours and 26 minutes, Miss Empire due to engine trouble being unable to reach the starting line. The speed test in this class was won by an Italian boat, Baglietto XXI, with a Marini engine, by twenty seconds over the British boat. The best time for a single lap, however, was made by Miss Empire in covering the five kilometers in 5 minutes, 8 1/5 seconds, an average speed of 58 kilometers an hour.

Miss Empire led her series in the speed tests for the Coupe de Cannes, heading Ardenrun by four seconds, while Pacifou had a thrilling race with Yzomona in the 8-12 meter class, the finish being so close that spectators from the shore were unable to pick the winner until the judges gave the former a quarter of a second lead over her rival. The final heat was one great burst of speed on the part of all four boats, six seconds separating the winner, Yzomona II from the fourth boat, Ardenrun. The French speed craft took first place over her sister ship Pacifou with a second and a half to spare, doing the best time of the week for the two kilometers in fifty and four-fifths seconds.

A challenge has been sent by Secretary John Ward of the International Motor Yachting Union in Brussels, which was accepted by Secretary A. T. Griffith of the Mississippi Valley Power Boat Association, and a Regatta at Oshkosh, Wis., is being arranged for July 3, 4 and 5 as a result. Four of the most prominent of the European speedsters are coming over and among these will be the Italian runabout Baglietto XXII, the boat which is credited with the European and world's records in her class. She is reported to have covered a mile at a speed considerably faster than any American 151 cubic inch class boats have ever made. Numerous American speed boat owners are preparing their craft to defend the titles against the foreign invasion, and the events promise to be keenly contested. It will be the first event of an International character staged for class boats, and is the beginning of a series of International contests of this type. More than likely it will be the turn of some of our American boats to take part in the European races next year.

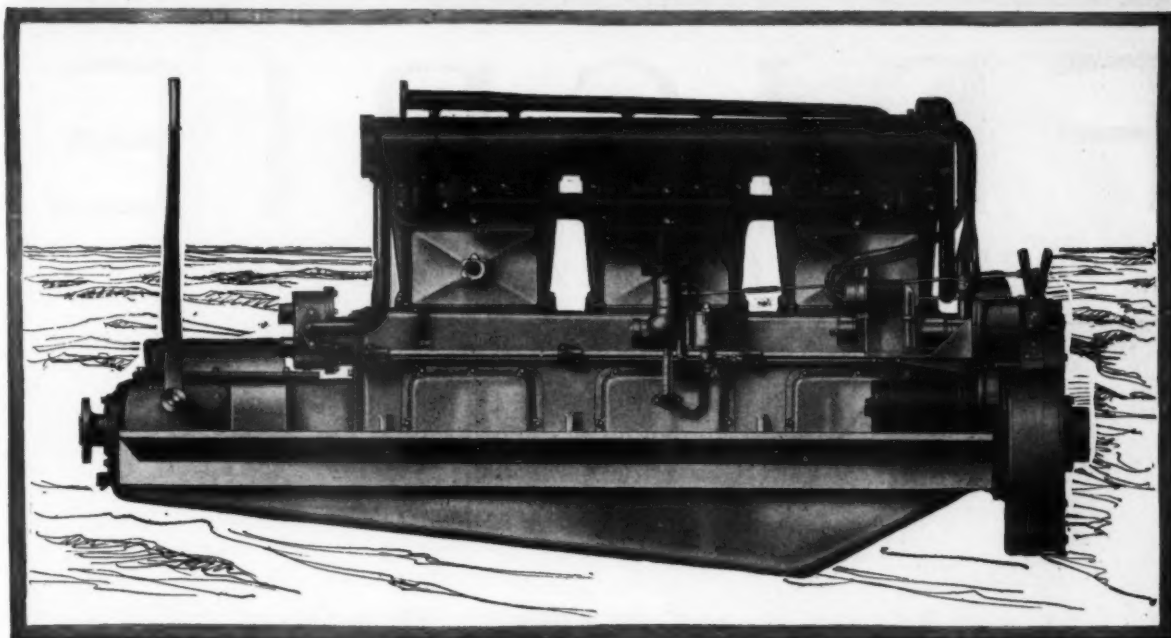
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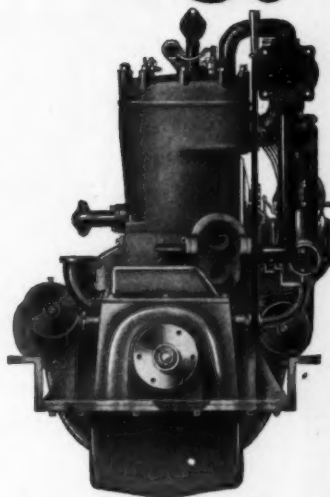
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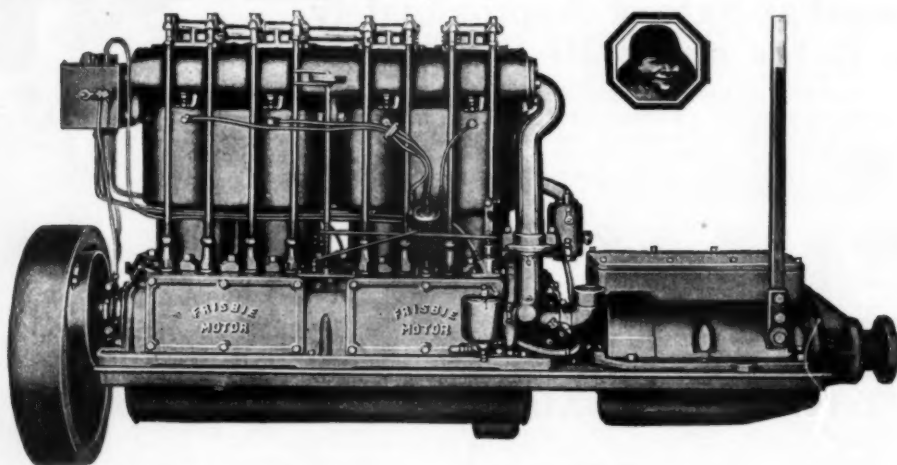


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Advertising Index will be found on page 130



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Volume 5.—One of the most valuable books of the entire set. Your motor's ills and how to cure them. This volume tells you how to adjust your carburetor, how to fit piston rings, how to remedy poor compression and a number of other things that will enable you to doctor your own motor. List of contents: Locating the Motor's Troubles; The Overheated Motor; Starting in Cold Weather; Overhauling a Marine Motor; How to Save Fuel; The Fuel Situation; Using Low Grade Fuel; How to Run on Kerosene; Supplying the Fuel to the Carburetor; Adjusting the Carburetor; Cleaning the Fuel Tanks; Cleaning the Gasoline Line; Stopping Up the Leak in the Tank; A Home-Made Gasoline Gauge; Carrying an Extra Supply of Oil; Mixing the Fuel and Lubricant; Remedying Leaky Compressions; Killing the Carbon Jinx; Tool and Spare Parts to Carry; Removing and Replacing Piston Rings; Repairing a Leaky Cylinder; Grinding a Motor's Valves; Setting the Valves; Timing the Ignition System; Cleaning the Water Jacket; Making and Fitting a Gasket; Patching Up a Bearing; Straightening the Sprung Shaft; Truing a Bent Propeller; Removing the Flywheel; Separating Couplings and Pipe Fittings; Changing the Shaft Hole Location; Utilizing the Exhaust; Disposing of the Bilge Water; Heating a Small Cruiser's Cabin; Operating the Outboard Motor; The Clean and Quiet Boat; Charging a Storage Battery; When the Motor Stops Unexpectedly; Making a Unit Power Plant.

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HIGH SPEED MOTORS

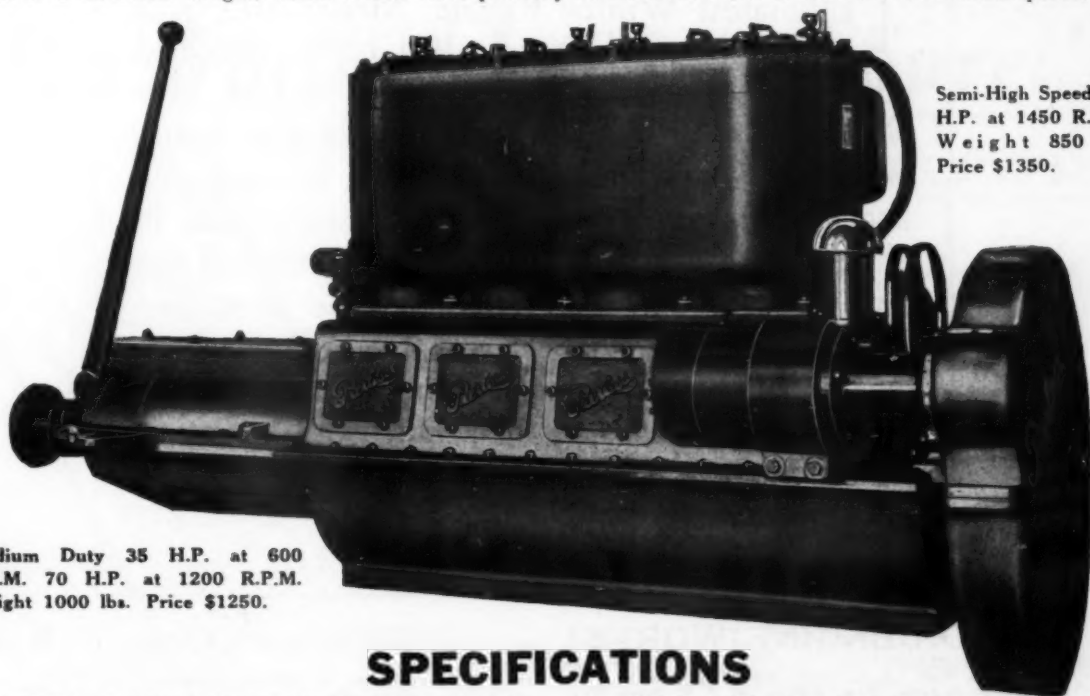
THE PEERLESS line of high speed marine motors, which are in a class by themselves from the standpoint of weight per actual horse power developed, reliable efficient service and price, when considering the fact that nothing but the best of materials and labor and accessories are used throughout their construction.

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The old reliable line of medium duty motors are too well known to need a further description here. They have been giving satisfactory and reliable service in all types of boats for a number of years. They can be had from stock in six sizes, ranging from 5 to 50 H.P.

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The new 35-70 H.P. Peerless motor fills a long felt want in the marine motor field. This motor has sufficient bore and stroke to develop its rated power at engine speed, which is practical in actual boat service. It is absolutely modern in regard to design and equipment, very quiet in operation, flexible in speed control, economical in fuel consumption, and consumes practically no oil, on account of the oil tight base and very efficient full pressure lubricating system. The crank shaft and connecting rods are machined all over, reducing the reciprocating parts to a minimum weight, which results in a perfectly balanced motor, free from vibration at all speeds.



Semi-High Speed 70-
H.P. at 1450 R.P.M.
Weight 850 lbs.
Price \$1350.

Medium Duty 35 H.P. at 600
R.P.M. 70 H.P. at 1200 R.P.M.
Weight 1000 lbs. Price \$1250.

SPECIFICATIONS

CYLINDERS. Cast four enbloc with detachable head, thoroughly water jacketed.

CRANK SHAFT. Six bearing crank shaft, nickel steel, machined all over and bored hollow for lubrication.

LUBRICATION. Full pressure to all working parts; dry sump type, oil supply in separate tank.

CONNECTING RODS. Drop forged nickel steel, machined all over, fitted with removable bronze bushing in upper end, bronze back babbitt lined bearing on crank pin.

VALVES. Medium speed model, fitted with cast iron head valves having carbon steel stem. High speed model, fitted with Rich Cobalt steel. Valves entirely enclosed.

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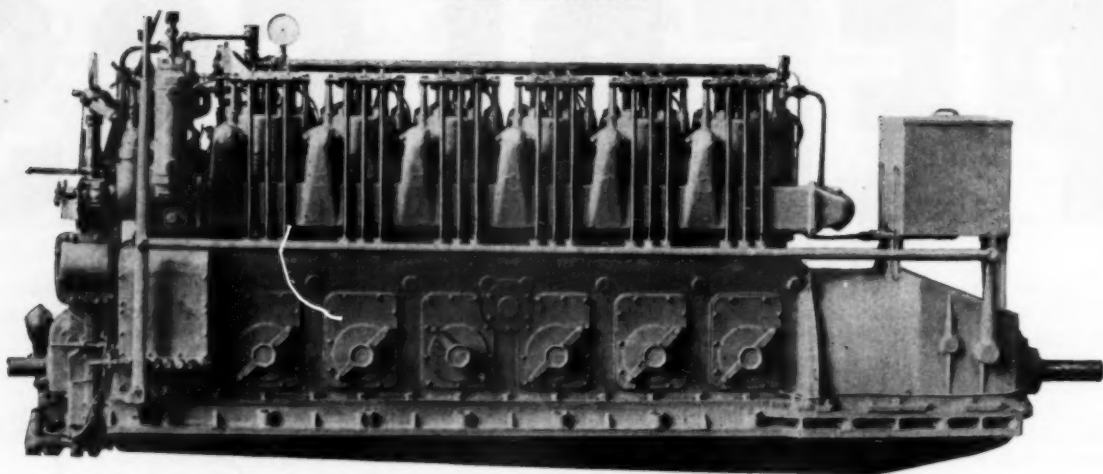
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THE latest Winton Engine, Model 105, is a small-size Full Diesel, 100 H.P., designed either for direct or electric drive. This new Winton Engine now makes possible the installation of a Diesel Type power plant in small-size and medium-size yachts. If you own a boat in either of these classes, you may now enjoy all the advantages of the most efficient type of marine propulsion. Economical, reliable, clean, quiet and smooth in performance, the Winton Model 105 is a decided step in advance of any other power plant of equal power. Details supplied upon request.

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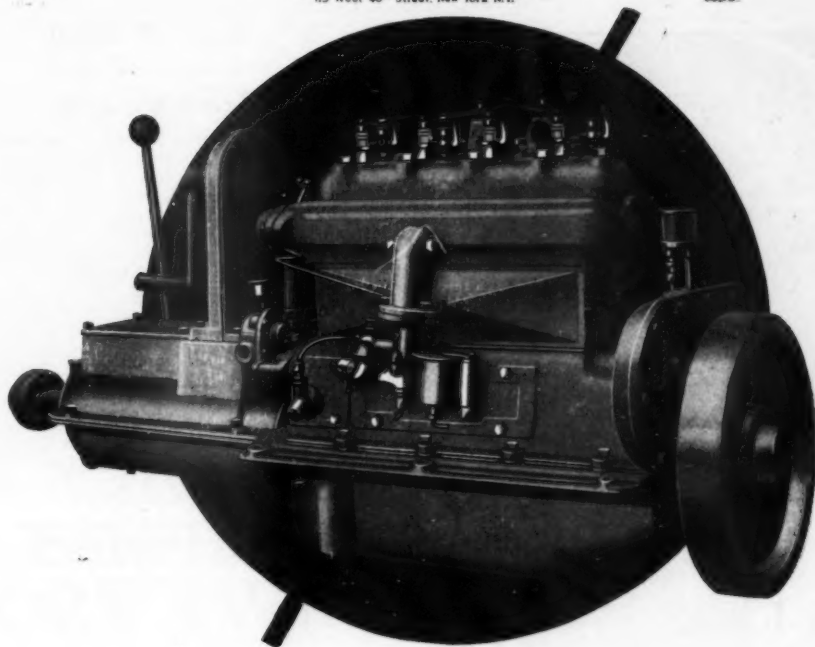
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Winton
 OIL DIESEL TYPE ENGINES

Advertising Index will be found on page 139



"It's Worth a Lot to be Sure!"

That's the way one Universal "fan" put it when asked why he stuck to Universal, even though his new craft slightly exceeded the maximum length for which we recommend Universal.

"It's worth a lot to be SURE!"

And in those seven words he packed all the wisdom of all the boating experts in the world! The power-surety of every Universal motor means even more to us than to the thousands of individual boat-fans who boost for Universal. Twenty-four years of marine motor engineering have brought us, along with success, the knowledge that the one big force responsible for Universal's position as "world's standard for boats under 30 feet" has been RELIABILITY!

Four cylinder—four cycle—9 to 12 horsepower—not an imposing set of specifications, are they? But add to them a reputation for dependability in some seventy countries—a reputation for season after season of unfailing SURE performance, smooth and flexible, and you have the secret of Universal's success!

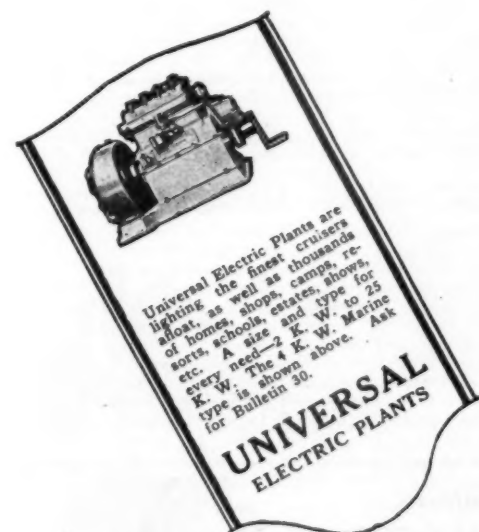
Yes, it IS worth a lot to be SURE!

Write for catalog, mentioning size and type of boat you have in mind. Atwater-Kent ignitor or Bosch magneto; self-starter if desired.

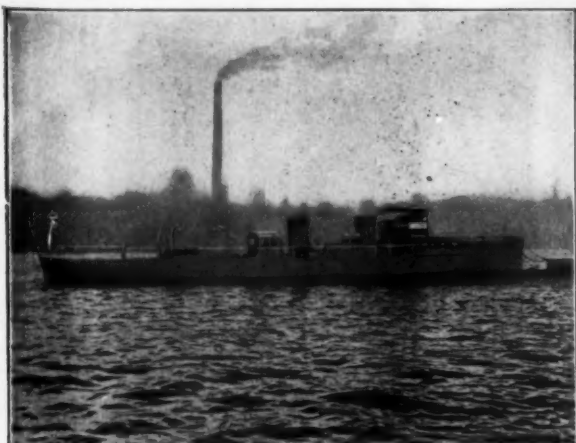
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Yachtsmen and motorboat owners everywhere are enthusiastic about the A. E. Co. Motorboat Electric Windlass.

This simple little machine takes all the hardship out of weighing anchor. It is as easy to operate as the self-starter of an automobile—you just step on the button and up comes the anchor!

It is powerful enough to handle anchor up to 300 lbs. yet is so light and compact that it can be used on small motorboats. You easily can install it yourself, as it is shipped ready to bolt in place.

It will run on your storage battery, or is furnished for any voltage. In any case, it costs practically nothing to run it and the price is certainly moderate.

Write us today for complete details or get in touch with your nearest dealer.



A. E. Co. Motorboat Electric Windlass, windlass type for chain—installed on the "Sybilla III"—We also make a smaller and lighter gypsy type for rope or cable.

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Detroit—Belle Isle Boat & Engine Co., 9663 E. Jefferson Street.

**"Step on the button—
up comes the anchor"**

Yard & Shop

(Continued from page 62)

New Pump Catalogs

An elaborate new catalog has just been published by the M. L. Oberdorfer Brass Company of Syracuse, which completely describes all of the many different types of pumps which this company makes. Varied uses in which fluids must be transferred from place to place have made it necessary to develop many kinds and sizes of pumps. This company specializes in devices of this kind and provides pumps for circulating water and oil on engines, supplying water in homes and factories, pumping lubricating and fuel oils, and in all industries where pumping of fluids is necessary in any way. They are made in all sizes from 1/8 inch up to 1 1/2 inch pipe size, and are arranged with all manner of shaft drives. Special forms of pumps are also built which are directly driven with electric motors, so that they are suitable for operating with remotely controlled switches, a condition which is frequently met with where the source of water supply may be at some distance from the point where it is to be used.

(Continued on page 126)

A New Standardized Cruiser

Among the many standardized cruisers now on the market is the new one just built by the Reliance Motor Boat Company of New York and called the Reliance Sportsman. This boat is an attractive little job, 25 feet length by 9 feet beam, and is provided with a four-cylinder Buffalo power plant. This engine is an ideal plant for a boat of this size, since it has ample power and is quiet in operation. The arrangement of the boat gives a roomy cabin and a large cockpit, which is entirely clear. Usual fittings such as galley, ice-box, and toilet are installed. Arrangements for sleeping four persons are provided.

A Floating Office

Not long ago we received a visit from Paul N. Runyon, the travelling yacht broker who happened to be in New York with his office for a few days. Mr. Runyon has developed the unique idea of living aboard one of the Casey sloops, which he is selling and on which he makes his office and home. The boat is moved from port to port along the New England coast, and opportunity is given to interested yachtsmen everywhere to come out and try this little sloop. At the same time a weather eye is kept open for suitable boats which can be offered for sale, or for clients who are in the market for boats. By moving from point to point Mr. Runyon keeps in close contact with conditions and is able to place boats to better advantage than he would were he to combine his activities to a single point.

Service for the Manufacturer

The Manufacturers' Service Division of the Vacuum Oil Company is a group of automotive engineers who are completely organized and equipped to give expert service in connection with the design and production of engines of all kinds in order that proper lubrication will be achieved. They will assist in the choice of materials, manufacturing processes, methods of testing, and similar problems so that the engineer will be able to obtain the maximum results possible. In addition they are undertaking an educational campaign which will teach the user of the proper methods of lubricating his engines. This service is offered to manufacturers without charge.

The Kaufman

SILVER BEAM

A powerful electric searchlight, made especially for marine use. All brass, accurately machined and heavily nickel-plated. Thoroughly rust-proof.

Operates on 6 volt storage battery, using 30 candle-power nitrogen bulb. Projects the most powerful beam known for a light of its size. Indispensable for spotting buoys, landings, piers and anchorages as well as avoiding driftwood and rocks.

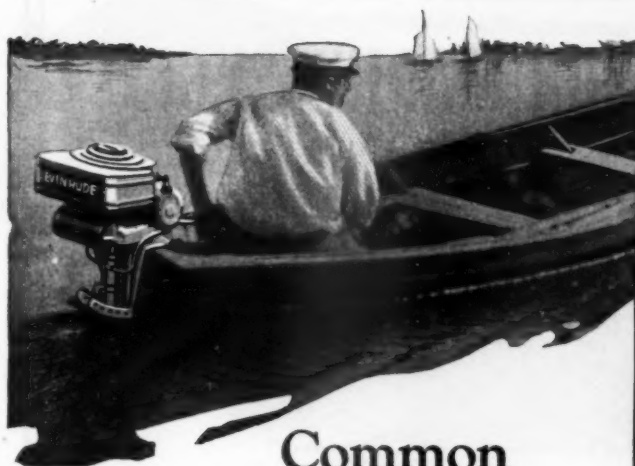
Swings in any direction or complete circle. Instantly detached for use as a work light. Also furnished with cabin control.

Prices.....\$4.00 to \$15.00

Sold by the best dealers everywhere. Write for Catalog No. 17

CHAS. KAUFMAN & SONS, Inc.
Santa Ana, California





Common Sense Dictates "SPORT TWIN"

MOTORBOAT-MEN prefer this newest and best Evinrude—they know that its smoother power, surer service and longer life are the result of 15 years' experience.

One ride in a Sport Twin-driven boat gives a new idea of outboard motoring. Without fuss or racket this husky little twin drives even a heavy dinghy at a smooth 6-8 mile clip. Its compact 40 pounds provide more speed and pep than you've ever seen in a boat-motor before!

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New Flywheel Magneto

Super-powered — assures instant starting and amazing performance. Moisture-proof. Eliminates heavy, uncertain batteries.

Sport Twin also made with bronze underwater parts for salt water use.

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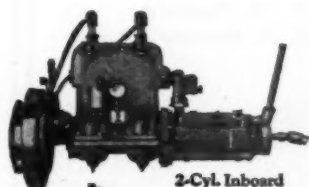
Float feed design — an exclusive Evinrude-Zenith model. Needs no adjustments. Throttles and accelerates quickly and evenly. Saves "gas".

New Safety Reverse

—automatic—at a lift of the tiller. Reverses drive instantly, without swinging motor around. Simple, certain and absolutely safe. No other like it.

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Motor cannot be injured by snags, shallows, or beaching (you can pull the boat right up on the dock). Can be locked for starting.



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METALWELD FORDSON MARINE ENGINE



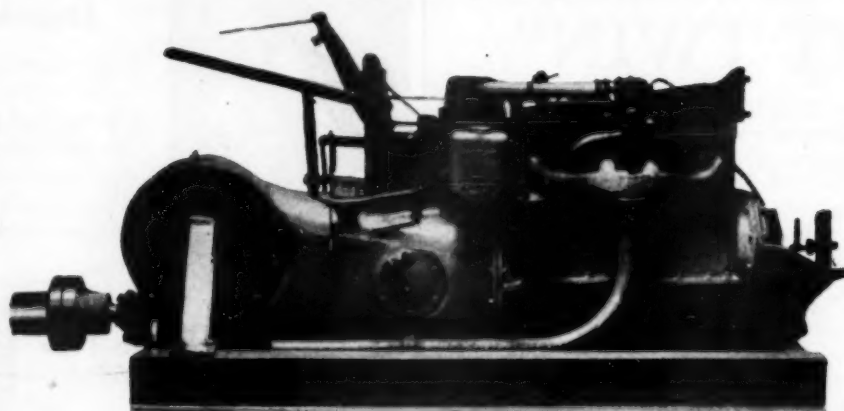
40' Boat x 12' Beam, Driven by a Metalweld Fordson Marine Engine
Speed 12 miles per hour

Speed

Economical

Power

Reliable



Patented and Patents Pending

FEATURES

Low Cost of Operation
 Burns Gasoline or Kerosene for Fuel
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 Electric Lights from Magneto
 Waterproof Magneto
 Auxiliary Equipment Driven from Side Pulley
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 Foolproof Gear Shift

SPECIFICATIONS

Weight, 1500 lbs.
 Engine Speed, 1050 R. P. M.
 Propeller Speed, 400 R. P. M. Forward
 Propeller Speed, 382 R. P. M. Reverse
 Engine Bed Length, 6 ft.
 Engine Bed Width, 24 in.
 Oberdorfer Gear Driven Pump
 Special Stuffing Box

Write for our literature and prices

Dealers: Send immediately for our agency proposition. Important territory now open.

The Metalweld Fordson Marine Engine is Mounted on an all welded steel I-Beam frame and is shipped complete ready for installation, with couplings.

Manufactured by

METALWELD SERVICE CORP.

FOX STREET AND HUNTING PARK AVENUE

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There's a Palmer Engine Just Suited to Your Boat

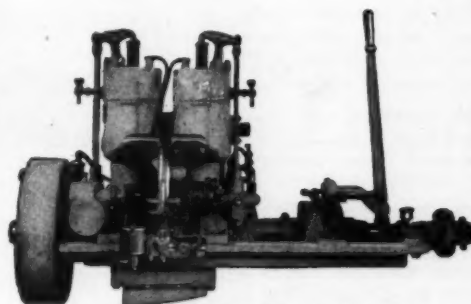
FOR many years Palmer Bros., have built the largest and most complete line of marine engines on the market. We have an engine exactly suited for every size and type of boat from a little launch or yacht tender up to a big cruiser or commercial boat.

In fact, most boat owners will find a choice of two or three Palmer models, depending on the amount of speed they want or the type of work they want it for.

The newest Palmer model is the YT-2, a double cylinder edition of our popular little 2 H. P. single cylinder four cycle yacht tender engine. It's up to date in every particular, with overhead valves, combination force feed and splash lubrication, high tension magneto with impulse coupling and counter balanced crankshaft.

Without reverse, weight 200 lbs. \$200.

With reverse gear, weight 260 lbs. \$240.



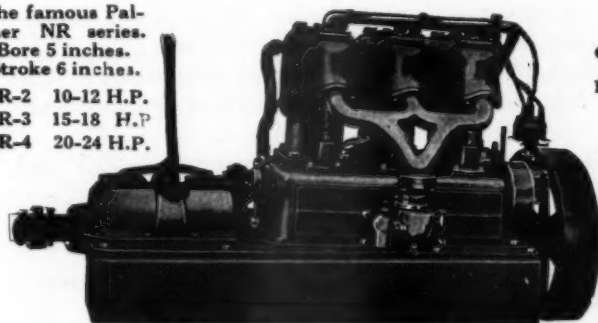
Model YT-2, \$200 to \$240.

The famous Palmer NR series.
Bore 5 inches.
Stroke 6 inches.

NR-2 10-12 H.P.

NR-3 15-18 H.P.

NR-4 20-24 H.P.



Palmer Engines are built for every type of boat, 2 H.P. to 80 H.P. High speed, medium duty and heavy duty.

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AT LAST! AN INEXPENSIVE SEA SLED

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 Beam5' 9"
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**Inverted V-Bottom
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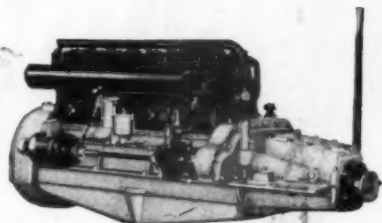
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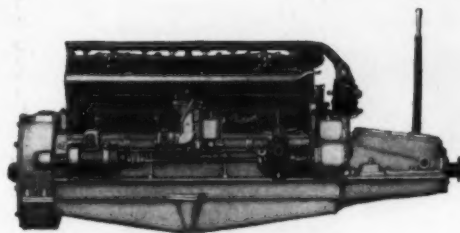
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Packard 1M-268
Six Cylinders - Weight 625 Pounds
45 H.P.—\$1500

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Important Advantages In These Two Great Marine Engines

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They offer the utmost in power, speed, flexibility, and unapproachable dependability with an extraordinary degree of simplicity. They throttle down to minimum speed without stalling—a feature that is a great help in making a clean landing.

They are very compact and as the figures show, light in weight.

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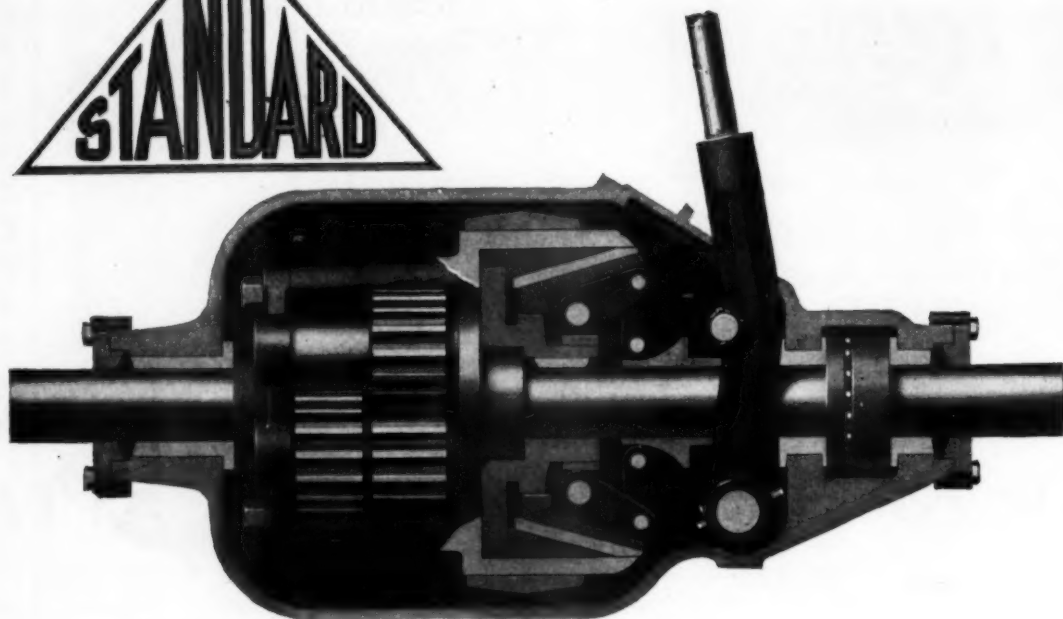
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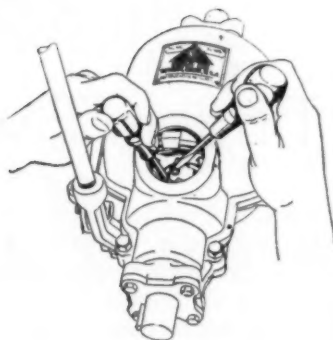
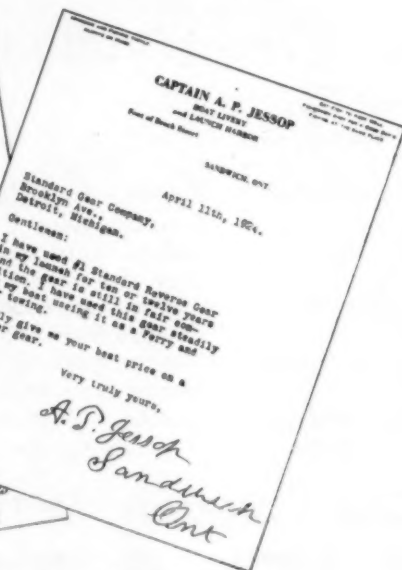
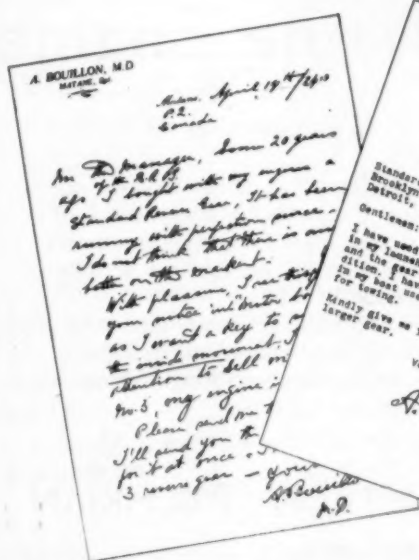
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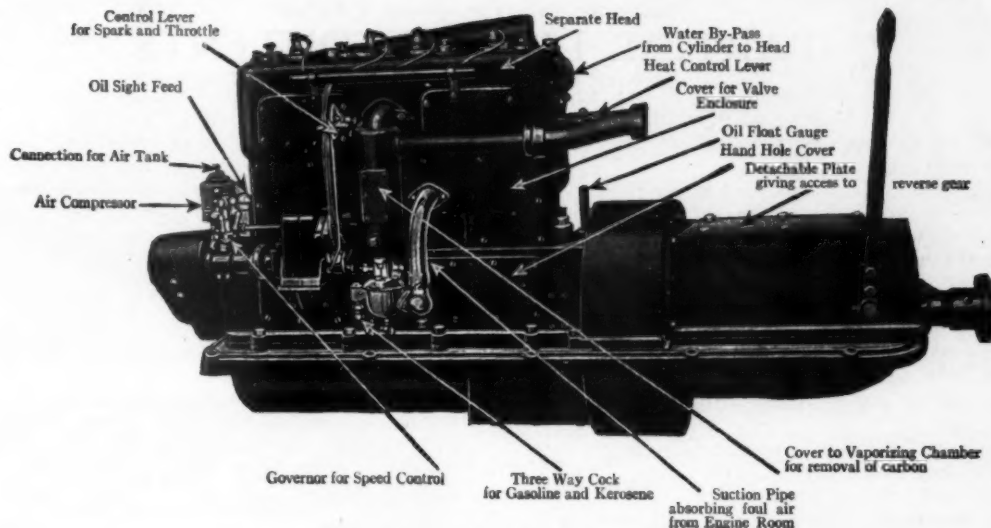
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STANDARD GEAR COMPANY

2819 BROOKLYN DETROIT



Built to Last



How Do You Judge the Value of a Marine Engine?

IF it's a question of design, you'll find the Miller conforms to the best marine engineering practice. If you are looking for advanced features and refinements, the Miller has many of these, a few of which are shown above. If you demand the best materials and workmanship, rest assured the Miller follows the highest standards.

All these points indicate the probable value of a marine engine, but the most convincing proof is the service and satisfaction received by users. Among the hundreds of boatmen who have bought Miller Engines since we started in business nearly twenty years ago we have gained many firm friends who recommend the Miller at every opportunity. Many of our engines are sold on the recommendation of users, and many are sold to boatmen who have used Miller Engines before.

Judge Persons of Georgia, after using a Miller Model I-4 for four seasons without spending one cent for parts or repairs, wrote us, "I gladly recommend the Miller Motor to anyone who desires utmost reliability in marine service."

Six Cylinder $3\frac{1}{2} \times 5$ for fast runabout or light cruisers

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1924 Edition 47th Year

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PARTIAL LIST OF CONTENTS

1924 Yachtsmen's Guide

(Ready July First)

- | | |
|---|---|
| <p>List of ports where numbers of motor boats are assigned</p> <p>New York—Florida, motor boat inside route</p> <p>A complete description of the course for motor boats to follow, where to get supplies, anchor, etc.</p> <p>Where to Cruise—</p> <p>A chapter giving numerous suggestions and hints on cruising, description of the best cruising waters in the East and on the Great Lakes</p> <p>Yachting signal code</p> <p>List of all yacht clubs</p> <p>List of marine engines manufactured</p> <p>Trent Canal</p> <p>Notes about Government Coast and Geodetic Charts</p> <p>Where to buy Government Charts</p> <p>Cruising to Florida in twenty days</p> <p>Racing Summary</p> <p>How to form a yacht c'ub</p> <p>Duties of yacht club officers and members</p> <p>Tables of times of high and low tides</p> <p>Tables showing time of sunrise and sunset</p> <p>Details of motor boat routes, New York to Albany, Albany to Buffalo, Albany to Thousand Islands, Albany to the St. Lawrence River and Montreal, New York to Philadelphia, Buffalo to Detroit, Miami, Fla., to New Orleans, etc., etc.</p> <p>Motor Boatmen's Charts of Lake Ontario, Lake Erie, Lake Huron, Lake Michigan, etc.</p> <p>Numbering Law—How to obtain numbers for your boat</p> <p>Index to principal harbors which are described</p> <p>Tide commutation table.</p> <p>Anchorage rules—Port of Boston</p> <p>Port of New York—Anchorage rules</p> <p>Rates of Pilotage—New York</p> <p>Distances—Boston to New York</p> <p>Lights—New York to Boston</p> <p>Distances and Bearings—New York to Maine</p> <p>Complete sailing directions (79 pages), entire Atlantic Coast, Maine to Gulf of Mexico. Detailed information on coastwise navigation, as well as complete instructions for getting into all harbors, bays, sounds, rivers, etc. Compass directions, distances, descriptions and locations of shoals, rocks and other dangers to Navigation. The waters described in detail include Atlantic Coast, Coast of Maine and all harbors and rivers. New Hampshire, Portsmouth Harbor, Massachusetts and all of its principal harbors; Massachusetts Bay, North, South and West shores Cape Cod Canal, Cape Cod to New York, Buzzards</p> | <p>and Narragansett Bays and Long Island Sound, including motor boat and yacht harbors, anchorages and tributary rivers. East River to New York City, South Shore of Long Island, New York Bay and Harbor, Coast of New Jersey, Hudson River, Chesapeake Bay, Delaware River and Bay, Hampton Roads and all tributary waters, Potomac River, Inside Route—New York to Florida</p> <p>Water Routes, New York to Chicago and Duluth, including New York State Canals, sailing directories on the Great Lakes</p> <p>Canadian Canals, sailing directions, distances and detailed information</p> <p>Illustrations and descriptions of various rigs of sailing vessels, spars, sails, rigging, etc.</p> <p>Illustrations and description of Seizings, hitches, bends, splices, etc.</p> <p>Nautical dictionary, defining and describing over 1,000 ship and boat names and terms</p> <p>Signals, semaphores, codes, weather and storm signals, wig-wag.</p> <p>The compass and buoys</p> <p>Useful information of use on board motor boats</p> <p>Help in case of accidents</p> <p>Definition of astronomical terms</p> <p>Buoyage system</p> <p>What to do in a storm, use of oil</p> <p>To prevent collisions</p> <p>Boat service, keeping a log</p> <p>Barometer, weather signs, signal stations, etc.</p> <p>Life-saving signals, information about sails, etc.</p> <p>Speed and knot table</p> <p>Compass points and degrees</p> <p>Various tables useful to motor boatmen</p> <p>A. P. B. A. Allowance tables</p> <p>Hints on motor boat handling</p> <p>Ignition and battery information</p> <p>Locating and what to do in case of engine trouble</p> <p>Hints on installation and operation of motors</p> <p>Government regulations and equipment required to be carried on board motor boats</p> <p>Yacht Routine</p> <p>Flags and how flown</p> <p>The International Code of Signals</p> <p>Sailing directions and entire set of courses from Nova Scotia to Florida (51 pages)</p> <p>Marks and symbols used in charts</p> <p>Rules of the Road at Sea</p> <p>Laws relating to yachts and motor boats</p> <p>Districts of the U. S. Steamship Inspection Service</p> |
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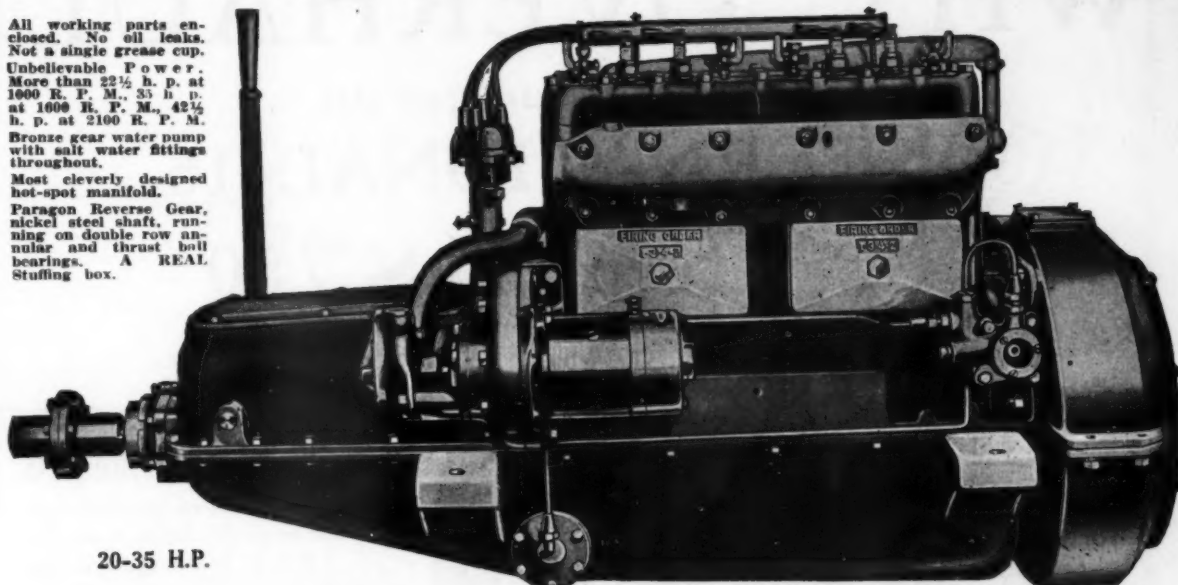
The Yachtman's Guide will be sent postpaid upon receipt of price \$1.50

MoToR Boating 119 West 40th Street, New York, N. Y.

Advertising Index will be found on page 128

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All working parts enclosed. No oil leaks. Not a single grease cup. Unbelievable Power. More than 22½ h. p. at 1000 R. P. M., 35 h. p. at 1000 R. P. M., 42½ h. p. at 2100 R. P. M. Bronze gear water pump with salt water fittings throughout. Most cleverly designed hot-spot manifold. Paragon Reverse Gear, nickel steel shaft, running on double row annular and thrust ball bearings. A REAL Stuffing box.



20-35 H.P.



Even the exterior view inspires your confidence, for you never saw a neater or more attractively finished marine engine. And under that handsome finish is the finest design, materials and workmanship that can be put into an engine.

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This new Erd was designed by one of the most experienced engineers in the industry. It is built by one of the oldest marine engine factories which has produced thousands of high grade engines. The price is low because our program calls for quantity production.

Let us send you the full details and prices. This data will help you, no matter what engine you buy. Write today.

Attractive proposition for dealers and boat builders.

Massive, three-bearing, Chrome Nickel Steel crankshaft.

Largest bearings of any motor its size.

End play adjustment for crankshaft — the only Marine Motor so equipped.

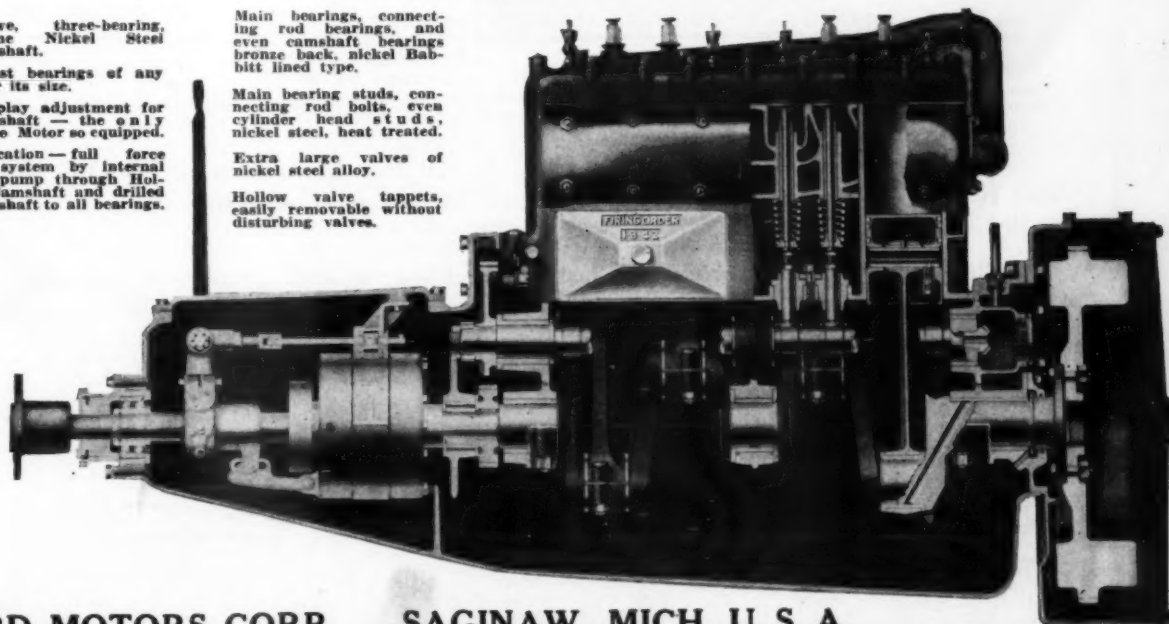
Lubrication — full force feed system by internal gear pump through Hollow Camshaft and drilled crankshaft to all bearings.

Main bearings, connecting rod bearings, and even camshaft bearings bronze back, nickel Babbitt lined type.

Main bearing studs, connecting rod bolts, even cylinder head studs, nickel steel, heat treated.

Extra large valves of nickel steel alloy.

Hollow valve tappets, easily removable without disturbing valves.



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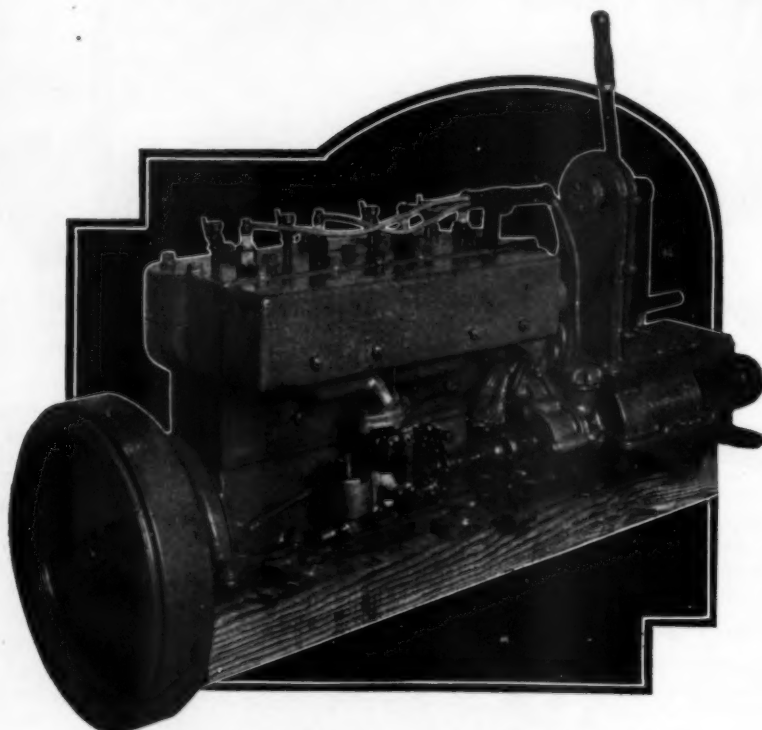
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Model
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A Coil is \$6.00 extra.

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Because of the low cost of large production on the 1924 International-16, it is possible to sell them for less than the average charge for a thorough overhaul on any other engine in the International's class. Besides, because of its Ford replacement part feature, it can be repaired at a minimum cost.

It is no longer necessary to buy an engine for your boat that is without adequate service facilities for a "Ford Service Station is the nearest service."

The International-16 develops 10 H.P. at 500 R.P.M. and up to 18 H.P. at 1200 R.P.M. Weighing only 290 pounds and compact in construction—it is an unusually adaptable engine.

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 Seattle, Wash.

Advertising Index will be found on page 120

The Last Call

The Official
Gold Cup Regatta
Program
Closes
August 10



August 10th is the closing date of D. Y. C. Main Sheet — Official Program for the world's greatest races — The Gold Cup Regatta. It will be published August 25th.

Then

it will go to thousands of motor boat enthusiasts.
it will be their hand book for this famous regatta
August 29-September 1.
it will be handsomely bound replete with information
on every phase of the regatta.
it will show all entrants, their boats, their class and
equipment.
it will give a detailed account of motor boat racing from
its inception.
it will go to the largest individual group of yachtsmen
in the country.
its advertisers will receive the permanent value of 15,000
copies of a 100 page program of the largest event of its
kind.

Those who have anything to sell to the motor boat industry and boat owners cannot afford to be left out. Five hundred thousand spectators viewed this event last year. Write or telegraph now for details to

The Main Sheet

HOTEL ADDISON, DETROIT
W. D. Edenburn, Editor

It Pumps While You Are Away*All Day, All Night, All Week
a faithful guardian***THE MILLER
- - Wave-operated - -
BILGE PUMP**

is on the job, ridding your boat of rain water and leakage.

Smelly bilge water, oily and dirty, no longer will slosh around, ruining carpets and locker duffle, and leaving streaks on interior woodwork. Every little motion of your moored boat, caused by wind or wave, works the pump.

**SIMPLE — STRONG —
SUPERSENSITIVE — AN
INSURANCE AGAINST
SUDDEN LEAKS.**



Patent
applied
for

Size No. 1, for boats up to 20 ft.—\$5.00—wt. about 8 lbs.
Size No. 2, for boats up to 30 ft.—\$8.00—wt. about 9 lbs.
Size No. 3, for boats up to 50 ft.—\$15.00—wt. about 12 lbs.

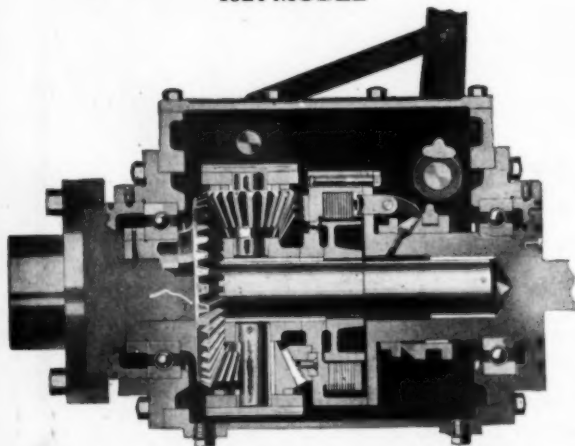
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Manufacturers**

Room 1361 50 Church Street, New York City

**McKINNON
REVERSE GEAR**

1924 MODEL

**Study This Design**

Notice the big bevel gears; notice the ball bearings. The new McKinnon is built to withstand years of hard service without wear, trouble or attention.

Completely enclosed — runs in oil. Multiple disc clutch. Direct drive on forward speed. Full speed on reverse. Easily adjusted.

Write today for prices.

The McKinnon Iron Works Co., Astabula, Ohio

**Commuting: Express Cruiser vs.
Railroad**

(Continued from page 23)

sixty, until December. So it will be seen that the season is a full nine months in length and somewhat more than 10,000 miles in distance. To date, not a trip has been missed on account of bad weather, storm or fog.

Mr. Townsend's home is at Greenwich, Connecticut. His daily schedule is to leave the Indian Harbor Yacht Club at 8:15 in the morning, just about the same time the average commuter via train is climbing aboard also. Well before nine o'clock, Sazarac is in the East River and by 9:20 is made fast at a pier close to the plant of the Moto-Meter Company at Long Island City. By 9:30, the president is at his desk, refreshed rather than fatigued by this thirty-mile trip, and has his mail all opened before his neighbors at Greenwich have reached Wall Street.

Sazarac, with her two Hall-Scott motors, running at 1550 revolutions per minute, will make an honest twenty-three miles an hour, day in and day out. However, it is not necessary to run the motors at this speed in order to reach New York on time under other than very unfavorable weather conditions. The motors can be throttled down considerably and still run smoothly with not a great falling off in boat speed. At 1400 revolutions per minute, the boat speed is 20.3 miles per hour, at 1200 r.p.m. she shows 16.8 miles and at an even thousand revolutions, 13.3 miles an hour.

Yard & Shop

(Continued from page 114)

A Folding Stool

A very substantial rigid seat which has been designed for use in limited quarters is being manufactured by the E. G. Long Company of New York, and since it is particularly suitable for installation on many boats, it is being mentioned here. This little stool is mounted on unbreakable malleable iron castings which are finished in aluminum bronze. The seat itself is finished in either oak, or in mahogany on birch, and has a diameter of 11 inches. When extended it is 14 inches from the bulkhead or support and when folded it projects only four inches.



The folding boat stool made by the E. G. Long Company in both its folded and extended positions.

Sterling Plant Busy

A list of recent purchasers of Sterling marine engines looks almost like a directory of prominent citizens of the United States. Many new boats being built throughout the country are being equipped with these popular engines, and from an inspection of the list it would seem that nobody is using any engines of less than 150 h.p. any more. The plant is working to full capacity, and in fact a night force is engaged on regular production in order to keep up with the orders. The Coast Guard engines which are being built at the Sterling plant, are being handled without delay to the regular production program.

**TOPPAN
OUTBOARD MOTOR BOAT**

*A Safe and Fast
Sea Skiff*

With the Powerful

3 H. P. ELTO MOTOR

Send for Details of Our
Combination Price

**TOPPAN BOAT
& ENGINE CO.**

125 Riverside Ave. Medford, Mass.

THIS SYMBOL IS YOUR GUARANTEE OF SATISFACTION

Propels your boat
anywhere it will floatLightest outboard motor
of its power

A light, powerful, speedy, sturdy and practically vibrationless outboard motor that in brief is the L-A Twin. Develops 3 full horse power, yet is easy to carry and easy to attach. As a complete unit, with everything ready to operate, it weighs 52 pounds—stands as the lightest outboard motor of its power on the market.

L-A Twin

It takes you where
the fishing's best

ANYWHERE the fish are biting the L-A Twin will take you. Through water ankle deep, over sand bars, rocks, snags and deadheads the L-A Twin will drive your boat—without damage to the motor, without injury to the boat. Automatic tilting of friction type protects the back end of the boat. The patented L-A slipping clutch propeller safeguards the propeller blades and protects the motor itself.

The L-A Twin is absolute proof against under-water obstacles. It propels your boat anywhere it will float.

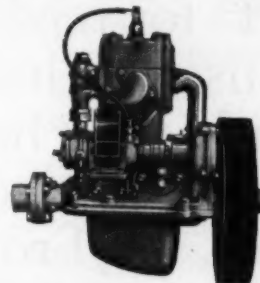
Special Features: Most powerful magneto in outboard field. Rope and rudder steering. Indestructible gas tank. Underwater parts made of non-corrosive Lynite. Quiet exhaust. Alemite lubrication. Built for the most exacting service—day-in and day-out.

Ask your dealer to show you the new L-A Twin, or write to us for complete information.

LOCKWOOD-ASH DISTRIBUTORS

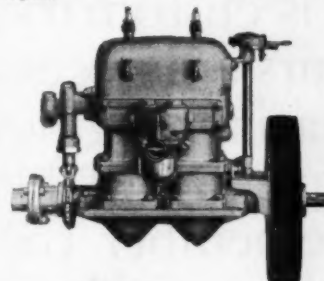
BROOKLYN, N. Y.: Hyde Boat & Engine Co., 356 Bergen St., at Fourth Ave.; NEW ORLEANS, LA.: Arthur Duvic's Sons, 122 Chartres St.; PHILADELPHIA, PA.: Marine Engine Co. of Philadelphia, Bourse Bldg.; SEATTLE, WASH.: Pacific Marine Engine Co., 906 Western Ave.; NORFOLK, VA.: Mianus Diesel Engine Co., 116 Boush St.; NEWPORT ARK.: Henry M. Owen; FORTH WORTH, TEX.: Veihl-Crawford Hardware Co.; JACKSONVILLE, FLA.: Burroughs-McMeekin Co., 30 E. Bay St.; MONTREAL, QUE., CAN.: F. I. Mitchell, 633 Notre Dame St., E.; ST. LOUIS, MO.: Wm. Grossmann, 1630 Pine St. FOREIGN EXPORT OFFICE: New York City, N. Y., 116 Broad St., Harold Fee, Manager.

L-A INEOARD MOTORS



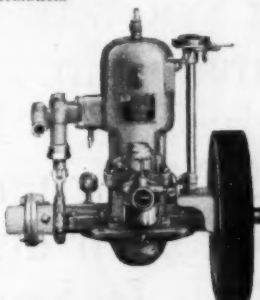
L-A Model 41

Ford Part Engine
Single cyl., 4 cys. 5 H.P. Motor. Built around Ford sized parts—replacements anywhere. Has Bosch Magneto and Impulse Coupling as standard equipment. Battery ignition in place of magneto, if desired. Many special features. Weighs approximately 165 lbs. Detailed information on request.



L-A Model 68

6 and 8 H.P. 2 cyl.-2cyc. Engines 6 H.P. for 15 ft. to 24 ft. craft. 8 H.P. for 20 ft. to 30 ft. craft. Equipped with battery ignition. Bosch Magneto and Impulse Coupling, if desired. Smooth running—easy starting—powerful—silent—clean—pleasing in appearance. Write for complete information.



L-A Model 24

2½ and 4 H.P. Single cyl.-2 cys. Engines. 2½ H.P. for 14 ft. to 18 ft. craft. 4 H.P. for 16 ft. to 20 ft. craft. Equipped with Battery ignition. Bosch Magneto and Impulse Coupling, if desired. Simple—sturdy—easy starting—trouble free. Ideal for inland lakes and rivers. Write for detailed description.

LOCKWOOD-ASH MOTOR COMPANY, 417 JACKSON ST., JACKSON, MICH.
Builders of Marine Engines for 21 Years

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¶ When I took over the entire sales distribution of W-S-M Marine Engines last January, I expected to do considerable business in service parts for repairs on the W-S-M engines already in use. This was a reasonable assumption as nearly nine hundred of these engines have been put in service during the past four and a half years. ¶ From January first to date the total sales of service parts have amounted to less than 100 dollars. That averages about 10 cents on each engine, covering a period of the year when it is customary to overhaul an engine if any repairs are necessary. ¶ In all my experience with marine engines for the past seventeen years I have never heard of such a low service cost. Remember these engines see hard work in big substantial boats. They develop 28 to 46 horsepower at medium speed, or 48 to 60 horsepower at high speed. ¶ If you buy a W-S-M it won't cost you any more in proportion to operate and to maintain. I would like to send you copies of the letters I have received from some of these W-S-M owners so you will know how they feel about their engines. *Write me for these.*

Wilbur H. Young, Department "MG," 522 Fifth Avenue, New York City, Telephone Murray Hill 8160. Distributor for W-S-M Marine Engines. Manufactured by Wellman-Seaver-Morgan Company.

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—they last longer



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- calling Pullman porters
- firing blasts
- lighting tents and outbuildings
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- radio "A"



Columbia Hot Shot Batteries contain 4, 5 or 6 cells in a neat water-proof steel case.



BUCKING upstream against the current—open the carburetor wide, speed up the engine, and watch the Columbia Dry Batteried boat spurt ahead. Let rain or spray splatter about—what cares the steel-cased water-proof Columbia Hot Shot! When you need it most, power flows from it, strong as the current you have to beat, swift as lightning; the same peppy performance that you get in the calm of backwaters.

Equal to all demands. Canned lightning at your service. Columbia Dry Batteries are like that. They work like blazes. When idle, they restore their energy and get ready to produce fat hot sparks anew.

Don't just ask for "a dry cell." Ask for "Columbia" by name and get 100% battery efficiency. Columbia Dry Batteries are sold by marine supply dealers, electrical, hardware and auto accessory shops, implement dealers, garages and general stores. Columbia Ignitors can be purchased equipped with Fahnestock Spring Clip Binding Posts at no extra cost to you.

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MoToR BoatinG Advertising Index

A

J

O

American Brass Co.	6
American Engineering Co.	114
Atlantic Supply Co.	78
Atwater Kent Mfg. Co.	80

Jennings Co., H. H.	52
Johnson Motor Co.	8
Jones, Frank Bowne	53

Oberdorfer Brass Co., M. L.	73
-----------------------------	----

B

K

P

Belle Isle-Hacker Boat Sales Co.	75
Bosch Magneto Corp., American	70
Bosch Magneto Co., Inc., Robert	109
Bowen, Thomas D.	62
Brennan Motor Mfg. Co.	85
Bruns Kimball & Co., Inc.	61
Bryant & Berry Propeller Co.	80
Buffalo Gasoline Motor Co.	2

Kainer & Co.	74
Kaufman & Sons, Chas., Inc.	114
Keenan, Walter Cook	62
Kermath Mfg. Co.	88-89-103
King Bros.	98
Koven & Brother, L. O.	105
Kuhls, H. B. Fred.	70
Kyle Co., T. A.	84

Packard Motor Car Co.	119
Palmer Bros., Engine, Inc.	117
Paragon Gear Works	3
Peerless Marine Motor Co.	111
Peru Model Engine Co., Inc.	80
Piston Ring Co., The	100
Purdy Boat Co.	71

C

L

R

Cady Co., C. N.	75
Caille Perfection Motor Co.	99
Caldwell & Co., J. E.	104
Carlisle & Finch Co., The	70
Carlyle Johnson Machine Co.	70
Carpenter & Co., Inc., Geo. B.	98
Champion Spark Plug Co.	70
Classified Advertisements	56 to 61
Climax Engineering Co.	107
Columbian Bronze Corp.	71
Columbia Dry Batteries	129
Consolidated Ship Building Corp.	4th Cover
Cox & Stevens	48-49-62

Lockwood-Ash Motor Co.	127
Long Co., E. G.	126
Lord, F. K.	62

Racine Boat Co.	82
Radio Corp. of America	65
Rajah Auto Supply Co.	92
Red Bank Yacht Works	81
Red Wing Motor Co.	97
Regal Gasoline Engine Co.	84
Reiter-King-Dugan Company	106
Reliance Motor Boat Co.	74
Richardson Boat Co.	72
Rigg Yacht Agency	54-62
Ritche & Sons, E. S.	82
Roberts Motors	82
Rochester Boat Works	82

Motor Boat Sales Tax Repealed

The 10% tax on the sale of new boats has been repealed, the repeal becoming effective at midnight, July 2nd, 1924.

This heavy tax has been a burden on every boat lover and every member of the marine industry for several years. It has undoubtedly prevented the building of many boats and prevented the sales of millions of dollars worth of marine engines and other boat equipment.

Of course it would have been better if this tax had been repealed last February or March, to release more orders for building 1924 boats; still it is not too late to order a new boat now.

This repeal is sure to prove a great stimulation to the sport of boating. Several boat builders have reported increased orders already. If you want a new boat this year, place your order at once.

once.

S

Detroit Marine-Aero Engine Co.	78
Dobson, B. T.	62
Dodge Boat Wks., Horace E.	5

Sanford, H. W.	56
Schellenberg, B. & Sons	82
Southland Jobbing House	73
Scripps Motor Co.	91
Sea Sled Co., Ltd.	118
Skaneateles Boat & Canoe Co.	80
Smith, Edward & Co.	81
Snow & Petrelli Mfg. Co.	102
Southern Cypress Mfrs. Assn.	52
Spitzdorf Electrical Co.	10
Standard Gear Co.	120
Standard Motor Cons. Co.	2nd Cover
Stearns-McKay Mfg. Co.	86
Stearns Motor Mfg. Co.	93
Sterling Engine Co.	3rd Cover

E

Eisemann Magneto Corp.	76
Elco Works, The	2nd Cover
Elgin National Watch Co.	66
Elto Outboard Motor Co.	87
Ensign Carburetor Co.	70
Erickson, Hubbard, H. & Co.	72
Erd Motor Co.	123
Evinrude Motor Co.	115
Eveready Flashlights	7

T

Fay & Bowen Engine Co.	132
Federal Electric Co.	76
Ferdinand & Co., L. W.	79
Fisher, Carl G.	67
Frisbie Motor Co.	108
Fyr Fyter Co., The	98

Tams & King	51
Tiebout, W. & J.	72
Todd Shipyards Corp.	1
Toppan Boat & Engine Co.	126

G

Gardner & Co., Wm.	54
General Sales Co.	86
Gielow, Henry J., Inc.	50
Gies Gear Co.	78
Gill & Sons Forge & Mach. Wks., P. H.	74
Goodrich Rubber Co., B. F.	4
Gordon Boat Bldg. Co.	68
Gray Marine Motor Co.	68-95
Great Lakes Boat Building Co.	12
Grebe & Co., Henry C.	52

M

Main Sheet, The	125
Marine Engine Co., of Phila.	59
Masters & Co., W. L.	61
Mathis Yacht Building Co.	83
McFarland Foundry & Machine Co.	71
McKinnon Iron Works Co., The	126
McNab-Kitchen Rudder Corp., The	96
Metalweld Service Corp.	116
Miami Copper Co.	104
Millers Motor Corp.	121
Monroe, Gordon	53
Mower, Chas. D.	55
Mullins Body Corp.	104

Universal Motor Co.	113
Universal Prescription Co.	74

U

H

Haddock, R. M.	55
Hall-Scott Motor Car Co.	63
Hamacek Marine Corp., A. F.	74
Hand, Jr., Wm. H.	62
Hanson, Thomas S.	62
Hopkins Jr., A. Inc.	72
Hyde Windlass Co.	70

N

National Carbon Co.	7-129
Naval Architects & Yacht Brokers	62
New Jersey Motors, Inc.	83
New Jersey Paint Wks.	74
New Jersey Zinc Co.	101
N. Y. Yacht, Launch & Engine Co.	71
Niagara Motor Corp.	94
Nock, Frederick S.	62

Valentine & Co.	47
-----------------	----

V

I

International Mfg. Co.	124
International Ship & Marine Engine Co.	79

W

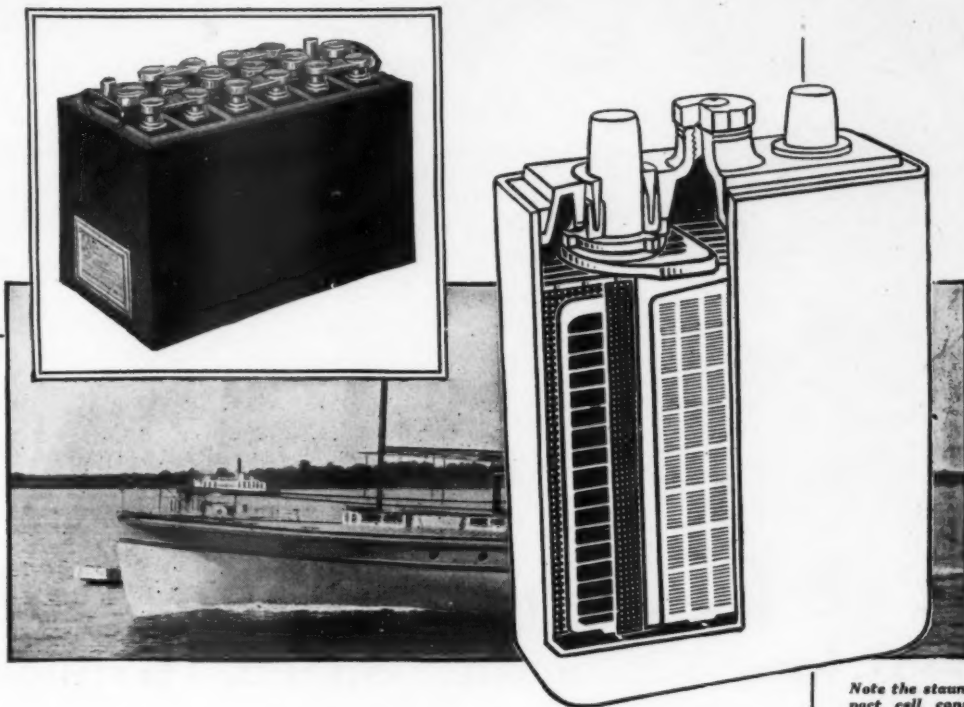
Washington Coffee Refining Co., Geo.	72
Wellman-Seaver-Morgan Co., The	128
Wells, John H.	62
Westinghouse Union Battery Co.	131
Weston Electrical Instr. Co.	64
Wheeler Schebler Carburetor Co., The	86
White Lake Boat Co.	90
Wilcox Crittenden Co., Inc.	75
Willis Co., E. J.	57
Winton Engine Works	112
Wisconsin Motor Mfg. Co.	9
Wollensak Opt. Co.	72
Wood, Inc., Gar.	69-77
Woolsey Paint & Color Co., C. A.	72
Wortmann, J.	58

Y

Yachtsmen's Guide	132
Yachtsmen's Service Agency	58
Young, Wilbur H.	128

Z

Zundel Co., Inc., R. W.	72
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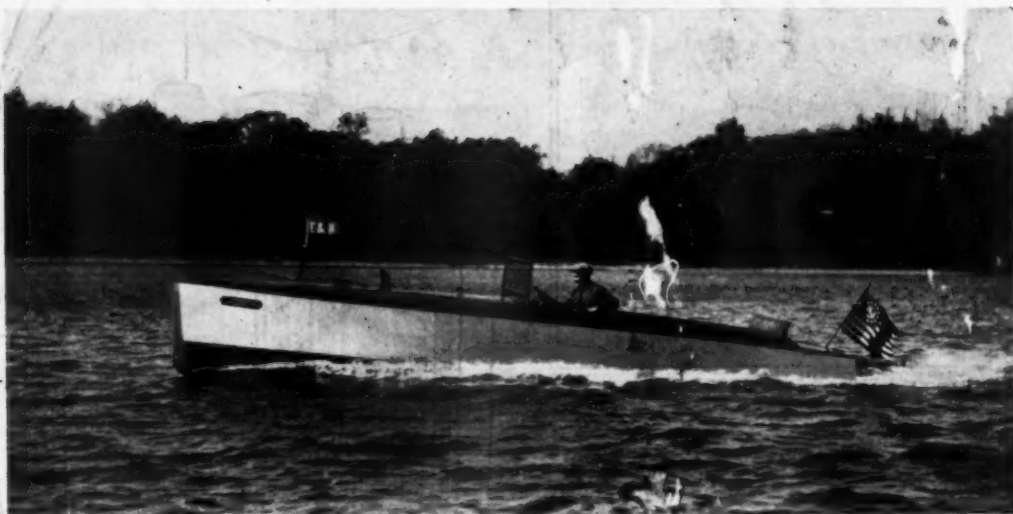
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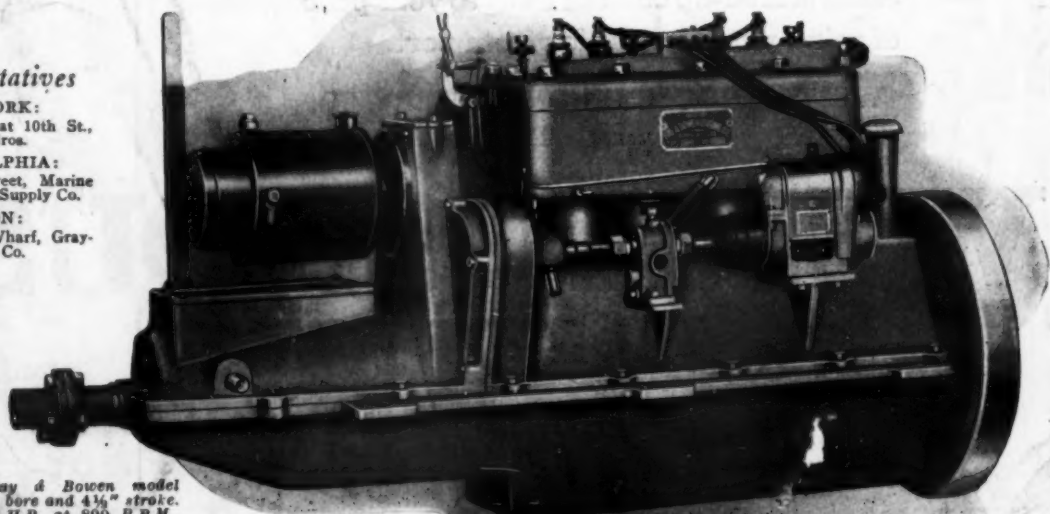
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